

# **EMD**

# **Instructor Manual**



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## **PURPOSE**

This trainee guide is intended to be used as a learning tool for the Utah Department of Health, Bureau of Emergency Medical Services, (referred to in this manual as EMS Bureau). This Emergency Medical Dispatch Standard Curriculum is in compliance with the National Highway Traffic Safety Administration Emergency Medical Dispatch National Standard. The purpose of this training course is to provide trainees with the knowledge and skills to perform their jobs at their local agency.

The trainee guide has been developed with the needs of the beginning Emergency Medical Dispatcher (EMD) in mind. It allows you to follow the instructor's presentation format during the EMD training course. You may also refer to the trainee guide after attending the course. This trainee guide is not intended to serve as a user manual, but to be used as a guide for EMD training course participants.

This trainee guide establishes the Utah Bureau of EMS Standard Curriculum for an EMD. It represents the required content of the EMD curriculum.

## **COURSE GOAL**

The overall goal of the course curriculum is to ensure that all users possess the baseline knowledge, skills, and abilities to successfully function in the role of an Emergency Medical Dispatcher.

## **COURSE STRUCTURE**

This course is designed to train dispatchers and call-takers to effectively direct and manage emergency medical resources. This course focuses on the EMD as the first responder in obtaining information from callers, selecting the proper protocol, dispatching resources, and giving medical instructions by telephone. Other areas of significance are the basic philosophy of emergency medical dispatching, legal concepts important to the EMD's job, and basic medical concepts necessary for understanding the medical content of emergency medical dispatching.

**NOTE:** The length of the course is a minimum of 24 hours. This course will provide EMD trainees with the skills and knowledge necessary to effectively dispatch resources for medical emergencies. These behaviors represent the required behaviors of effective EMD personnel. The information contained in each unit will be taught using instructor presentations, demonstrations, and practical exercises designed to reinforce classroom learning. The course will end with a comprehensive, hands-on exercise encompassing all that was taught in the course.

### **AUDIENCE DESCRIPTION**

This course is designed for dispatchers who require instruction in the medical content of emergency medical dispatch. It is assumed that these users have little or no prior knowledge in the medical aspects of emergency medical dispatch but have completed a basic telecommunicators course (or comparable experience). The main areas of instruction will focus on the telephone skills required to get information, resource allocation, and the Emergency Medical Dispatch Protocol Reference System (EMDPRS).

Ideally, course participants will be from the same agencies; however, when this is not the case, participants will be expected to train with the EMD protocols from their respective employing agencies. The course should be modified to meet local needs that have been identified by local medical authorities and the EMD guidance committee. An effort has been made to ensure that the course content is generic enough to encompass all of the major areas for instruction, without being so specific that it cannot be modified for local needs.

### **INSTRUCTOR AND COURSE REQUIREMENTS**

The course coordinator must adhere to the guidelines in the course coordinator manual. All instructors should also be familiar with the content of the course coordinator manual.

This course is instructor-facilitated. This means that the instructor is responsible for training participants, coordinating instructional activities, and ensuring objectives are met.

The instructor(s) for this course shall possess thorough knowledge of emergency medical dispatching and the working environment of public safety telecommunications. Instructors selected for this course shall also have proven competency as instructors in other courses, have proficiency in the skills and concepts that are being taught in this course, and shall have successfully completed a recognized EMD training course.

It is essential that the instructors for this course be capable of understanding, presenting, and defending ALS level-Dispatch Life Support information. For the medical portion of this course, the instructor(s) shall be an EMD instructor certified at the EMT-Intermediate or higher level or team teach with an EMT-Intermediate or higher. Alternately, the medical portion of this course can be taught by a critical-care trained physician, nurse, or physician's assistant.

This high level of instructor qualification is due to the need for the instructor to facilitate trainee learning and understanding of the medical content of this training, and to facilitate their ability to interrogate and evaluate the information provided by callers. It is also required because trainees will need to be able to categorize caller information and appropriately assign predetermined response configurations and modes (adapted from ASTM standard F1552-94, section 5).

### **PARTICIPANT MATERIALS**

The participants must be provided with a Trainee Guide and other materials during this course. The Trainee Guide is the **training course book** that contains all the information, exercise aids, scenarios, and other materials required to complete this course. It is presented in the order in which the course is taught.

The Trainee Guide is divided into instructional units. Each unit contains reference data, exercise aids, and other materials required to complete the course.

The first page of each unit describes the contents of that lesson. The lesson objectives are listed following each lesson description.

### **INSTRUCTIONAL RESOURCES AND REQUIREMENTS**

During this course you will use a variety of instructional resources. These include written materials, lesson plans, exercise aids, presentation screens, and an examination. Each is described on the following pages.

**Written Materials.** The written materials required include the Trainee Guide described previously, supplemental handouts, and this Instructor Guide. Use supplemental handouts as you feel appropriate for this course. Make sure this Instructor Guide is with you at all times during the course.

The **Trainee Text** column provides an identical copy of the trainee guide text and subject matter to be covered.

The **Instructor Notes** column provides directions to the instructor and notes for presentation. You can use the lesson plans in several ways based on your own style of teaching and comfort level. First, use it to prepare for the course. Become familiar with the subject matter, the order in which it is to be taught, the facilitation of instructional activities, and their solutions. Second, use it during the class to guide your presentation. Use it at both times as necessary. Don't forget that you can deviate from the plan as necessary to enhance your presentation or to meet the needs of a particular audience.

You may not delete any material from this course, however you may replace Chapter 9 with locally approved EMDPRS. Additions to the course are acceptable, but the course contents provided here are the minimum content areas that will be covered.

Unit plans do not indicate when to take breaks. Because this course is instructor-facilitated and involves a variety of participant activities, the instructor should decide when to call a break and for how long.

## *Introduction*

**Exercises and Exercise Aids.** Exercises are very important. Their main purpose is to reinforce concepts taught in the units. It is important that you use exercises frequently to reinforce learning. Frequent, short exercises are very helpful for adult learners, especially if they allow practice of a concept. They also help to break up the monotony and allow you to inject some “fun” into the lecture.

Exercise aids are used by the participants to complete a given exercise. These aids require the participants to record information or perform an activity. Each exercise aid is contained in the Trainee Guide and referenced where appropriate in the lesson plan. Become familiar with how to use each of these aids before teaching a class.

**Presentation Screens.** Overhead presentation screens are used in this course as visual teaching aids.

The transparencies are designed to be clear, straightforward indicators of topics to be discussed or content to be emphasized. They are in a bulleted text format. Make sure you are familiar with their contents before using them. HINT: Watch when using color transparencies. Too many colors tend to be irritating and distract from the original purpose of focusing trainees and instructors to the material at hand.

Slides and transparencies are especially helpful when teaching certain confusing topics. This is especially important for topics like the medical section. Developing your own graphics for a presentation helps you to tailor the curriculum to the agency being trained.

**Examination.** This course includes an end-of-course examination, to be administered on the last day of the course. It consists of performance-based exercises related to the objectives throughout the course. Content areas to be included in the final examination are chosen by the local medical authority. This Utah EMS and NHTSA curriculum suggests that the final examination (and other exams in the course) be based on the unit objectives.

You should evaluate each participant’s performance after he or she completed the end-of-course examination. After the course, you should review exam performance for weak areas in the instruction and make adjustments as necessary.

## **REQUIRED EQUIPMENT, MATERIALS, AND FACILITIES**

A variety of equipment and facilities are required to present this course. Make sure they are available and ready prior to conducting the course.

## *Introduction*

**Equipment.** The following equipment is required to teach this course.

1. Overhead projection system. Make sure the equipment is in working condition before the course begins. Also ensure that extra bulbs are available for proper use.
2. Chalk board or white board.
3. Chart paper and easel.
4. Mock-up telephone consoles (like those used in the local agency), or at a minimum, working telephones to conduct scenarios/scripts.
5. VCR and audio cassette players for videos and audio tapes depicting “real-life” scenarios.
6. Participant tables/desks. Make sure the room contains tables or desks large enough for each participant to spread out a large volume of data.

**Reference Materials.** The following is a list of reference materials that should be located in the classroom for use by the participants throughout the instruction, in the exercises and as general reference. This list identifies minimum requirements. You may want to supplement this list with other materials that you find timely or appropriate.

1. Trainee’s Guide
2. Instructor’s Guide
3. Other documents selected by the instructor or designated for use by local authorities (like agency policy and procedure guides, final examinations, on-the-job training documents and medical references).
4. Audio and video tapes. It is important that you use any tapes you have access to in order to demonstrate dispatch in action. They can be used for critiquing EMD behaviors (good and bad), for demonstration purposes of how to deal with problem callers, or for practicing with guide cards. Just about any situation you can think of can be demonstrated through the use of audio or video cassettes. You can even make them up with a partner for use in your classes.

## *Introduction*

**Facilities.** The following facilities are required to teach this course.

1. A main classroom large enough to comfortably hold a maximum of 24 participants, instructional equipment, etc. Regardless of the number, the classroom should be large enough to comfortably seat everyone.
2. “Break-out” sessions and labs (rooms where individual trainees, groups/teams of trainees or instructor-trainee pairings can retire to conduct exercises, practice using trainee materials, or meet to review course materials).
3. Break area.

### **STUDENT EXPECTATIONS**

This training program is detailed and exacting. The EMD is an important, recognized part of the medical team. The standards are high and will remain high in order to maintain the respected position on the medical team in the community. To be recommended to become a fully certified EMD, it will be necessary for the student to comply with certain requirements. These requirements are as follows:

1. **Attendance** - Students will be required to attend all scheduled classes. If for some reason the student is unable to attend a class (illness, etc.), they must make arrangements with the Instructor or Course Coordinator to make up the material missed.
2. **Class Participation** - Students will be evaluated by the Instructors and Course Coordinator, in such areas as dependability, attitude, maturity, and the ability to relate well with others, in addition to the student’s ability to achieve acceptable performance levels. The Instructor or Course Coordinator will provide remediation for students having difficulties in any area of the course.
3. **Written Test** - At the conclusion of the course, the students must successfully complete a state administered test on a computer. The test is multiple choice based on the course objectives and is graded on a pass-fail basis (percentage scores are not available). The student will be allowed only two attempts to pass this test.
4. **Recommendation for Certification** - The Instructor/Course Coordinator must document that the student has the skills, abilities, attitudes, and professionalism necessary to become certified as an EMD and submit a letter to the EMS Bureau stating such.
5. **State Certification** - State certification will be issued upon successful completion of all the above listed requirements. These requirements must be met within 90 days of the completion of the course. It takes approximately three weeks following testing for the results to be processed and the student to receive their certification in the mail. Students will receive a state certificate, identification card, patch, and decal.



### **REVIEW OF COURSE REQUIREMENTS**

EMD Trainees must:

1. Have successfully completed a Bureau of EMS approved Basic Emergency Medical Dispatch training (minimum of 24 hours).
2. Be currently certified in cardiopulmonary resuscitation (CPR) through a Utah Department of Health approved course.

### **CERTIFICATION REQUIREMENTS**

All course requirements and testing must be completed within 90 days of the course completion date. Any delay will be cause for the student to be denied state certification.

The state certification exam will be taken on a computer and is a time limited test.

- Results will be sent by mail after the test has been graded and after all course fees and required records are submitted to the EMS Bureau. Test results will not be given over the telephone.
- Students may have two (2) chances to successfully complete the written exam.
- If retesting is necessary, the student must make arrangements with the EMS Bureau to schedule another exam. The computer test may be taken at specified computer locations by appointment. The student will be required to submit additional test fees prior to the retest.

**Fees** Refer to Course Coordinator, EMS Bureau or Internet web site for fee structures. Fees will include, but are not limited to the following:

Written Exam  
Certification Fee  
Written Exam Re-test  
Recertification Fee  
BCI Checks

The Utah State Bureau of Emergency Medical Services' website is <https://bems.state.ut.us>.

### **WRITTEN TEST LOCATIONS**

Bureau of EMS	288 N. 1460 W	Salt Lake City
UBATC	1100 E. Lagoon	Roosevelt
BATC	1301 N. 600 W.	Logan
So. Utah University	300 W. Center	Cedar City
College of Eastern Utah	639 W. 100 S.	Blanding
College of Eastern Utah	451 E 400 N	Price
American Fork Hospital	179 N. 1100 E.	American Fork
Weber State University	3750 Harrison Blvd	Ogden
Snow College	345 W. 100 N.	Ephraim
Delta Tech.	305 E. 200 N.	Delta
Richfield Tech.	800 W. 200 S.	Richfield
Dixie College	225 S. 700 E.	St. George
Mt. View Hospital	1000 E. Hwy 6	Payson

Please contact the Bureau of Emergency Medical Services at 538-6435 (option 1) to schedule your test. Please have the following information ready when you call:

- 1) Course number
- 2) Date of course
- 3) Course Coordinator
- 4) Your Name
- 5) Your Social Security Number

### **FUNCTIONAL POSITION DESCRIPTION: EMERGENCY MEDICAL DISPATCHER**

The following general position description is provided for the EMD. It should guide you when giving advice to anyone who is interested in understanding qualifications, competencies, and tasks required of the EMD. It is the ultimate responsibility of an employer to define specific job descriptions within each entity.

### **QUALIFICATIONS**

To be initially certified as an EMD a call-taker/dispatcher shall:

1. Successfully complete a state approved EMD course.
2. Be currently certified in cardiopulmonary resuscitation (CPR) through a Department-approved course.
3. Successfully pass the Bureau of EMS written examination.

Generally, the knowledge and skills required show the need for a high school education or equivalent. Also needed is the ability to communicate verbally via telephone and radio; interpret written, oral, and diagnostic instructions; use good judgment and remain calm in high-stress situations; work effectively in an environment with distractions; function efficiently throughout an entire work shift; read small print, under time constraints; read and understand English language; interview complainant (caller); document all relevant information in prescribed format; and converse in English with coworkers and EMS personnel.

### **COMPETENCY AREAS**

#### **Emergency Medical Dispatcher**

Must demonstrate competency in handling emergencies utilizing telecommunications equipment and medical dispatch priority systems in accordance with behavioral objectives in the approved EMD curriculum.

#### **Description of Tasks**

Receives calls from public, responds verbally to emergency calls, dispatches appropriate EMS providers, and gives appropriate pre-arrival instructions to complainant prior to arrival of pre-hospital EMS personnel

### **ABOUT THE COURSE**

Emergency medical dispatching involves the combination of telecommunications skill and medical knowledge. An Emergency Medical Dispatcher must successfully master this body of skill and knowledge in order to be most effective in serving the public's emergency medical needs as part of the local EMS system.

The State of Utah EMD course is in compliance with the National Highway Traffic Safety Administration's *Emergency Medical Dispatch: National Standard Curriculum* and is designed to provide skill and knowledge. The course is an advanced dispatch course, with its main emphasis on the medical side of emergency dispatching.

*The Emergency Medical Dispatch: Utah Bureau of EMS Standard Curriculum* is designed to provide enough material to ensure a student will be able to:

1. State and identify the roles and responsibilities of an Emergency Medical Dispatcher;
2. Obtain sufficient and accurate information from callers to dispatch resources properly and efficiently;
3. Allocate resources properly and according to local medically approved protocols;
4. Recognize the need for and be able to recall EMS resources as appropriate and necessary;
5. Give appropriate emergency medical instructions.,
6. Understand the medical information found in locally approved Emergency Medical Dispatch Protocol Reference Systems; and,

### **DEFINITION OF ACRONYMS**

Throughout this manual you will see the acronym EMD. This acronym has two meanings: either Emergency Medical Dispatch or Emergency Medical Dispatcher, depending on the context in which it is used.

# **CHAPTER ONE:**

## **ROLES AND RESPONSIBILITIES OF THE EMD**

### **OVERVIEW**

This chapter introduces you to the basic concepts of emergency medical dispatch. It provides you with information relating to the functions of the EMD and what it takes to be an effective EMD. Chapter 1 also outlines the basic roles and responsibilities of the EMD, and provides information about the three phases of the dispatch function. This Chapter forms the basis for the remainder of the course. The roles and responsibilities of the Emergency Medical Dispatcher (EMD) will vary some respects, by locale. However, there are some functions and characteristics common to all EMDs.

### **INSTRUCTOR NOTES:**

**State the objectives.**

### **OBJECTIVES**

- 1.1 Describe the Utah Emergency Medical Services (EMS) system and it's components.
- 1.2 List the three roles that EMDs play in the EMS system.
- 1.3 Identify roles and responsibilities of the EMD.
- 1.4 Describe the qualities and attitude that the EMD is required to show on each call.
- 1.5 List/explain the three phases of the dispatch function.

## ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

### **COMMON MISCONCEPTIONS ABOUT EMD**

There are many misconceptions about Emergency Medical Dispatch and EMDs. Some of these misconceptions are listed below.

1. *Callers are too upset to provide accurate and useful responses to the EMD.* Experience indicates that using the question sequences provided by the EMDPRS (Emergency Medical Dispatch Protocol Reference System), allows you to elicit information necessary for effective dispatch.
2. *Callers are unable to provide the EMD with required information to assist them and effectively dispatch emergency medical resources.* The EMDPRS protocols are designed to assist an EMD in obtaining the proper medical information for effective dispatch.
3. *All EMS calls must be answered "lights and sirens."* In most cases, this is unnecessary. Most calls are not life threatening, and use of an all-out response can be dangerous for both responders and bystanders. Refer to your locally approved EMDPRS for the appropriate responses available to you.
4. *The EMD is too busy dispatching to worry about asking all necessary questions, to provide instructions, or use medical protocol cards (EMDPRS).* Effectiveness is the key concern. EMD's are trained to use the EMDPRS, which contain questions designed to obtain the information needed for effective dispatch.
5. *Emergency Medical Instruction (provided over the phone) cannot help patients and could actually be dangerous.* EMDs are trained to use the EMDPRS and to follow it **exactly**. The EMDPRS is approved by a local medical authority whose job is to see that the EMD Protocols are medically sound and appropriate for Emergency Medical Instruction over the telephone by EMDs.
6. *Using the EMDPRS increases the amount of time and resources required to process a call.* Experience has shown that the time required to process a call increases very little in systems using the EMDPRS. In some cases, the response time even decreases.
7. *EMDs should have advanced medical knowledge.* Because the EMD is operating in a blind environment, having actual "hands-on" advanced medical knowledge is not required. The basic medical concepts presented in this curriculum provide sufficient medical knowledge for the EMD to use medically approved dispatch protocols.
8. *EMDs should fear being sued for providing medical instruction to a caller.* When an EMD follows their policies and procedures, and uses the approved EMDPRS exactly, the EMD should not be concerned with lawsuits.

## Chapter One: *ROLES AND RESPONSIBILITIES OF THE EMD*

9. *EMDs should fear telling callers that help is “on the way”.* Reassuring a caller that help is “on the way” (*once they have been dispatched*) may relax callers, making it possible for them to focus on your questions and instructions.

### INSTRUCTOR NOTES

**Discuss the EMS system.**

### THE EMS SYSTEM

**Emergency Medical Services (EMS)** includes all personnel of the local public safety system with specific, specialized medical training. An EMS system is defined as a coordinated arrangement of resources (including personnel, equipment, and facilities) organized to respond to medical emergencies regardless of the cause. An EMS system covers the spectrum from prevention (changing behavior to prevent injuries from occurring) through rehabilitation (returning individuals to productive lives after an injury incident has occurred).

The EMS system is a complex arrangement of components including: legislation; communications; public information and education; facilities; trauma systems; medical direction and evaluation all designed to serve the needs of the public in medical emergencies. The essential components must work together and function efficiently to complete the EMS system.

Where does the EMD fit into the scheme of the EMS system? The answer to this question varies by locale. The EMS system in each county, city, or suburb may differ. It is the responsibility of the EMD to fully understand the EMS system in which they work.

### EMDS ROLE WITHIN THE EMS SYSTEM

**First**, the EMD is the initial point of contact for callers seeking medical assistance. It is commonly said that EMDs are the 1<sup>st</sup> First Responders.

**Second**, the EMD serves as a vital communication link between the person in need and the resources available in the local emergency medical services system.

**Third**, the EMD helps callers administer initial emergency medical care to persons who need assistance. In this respect, EMDs assist callers in saving the lives of persons in whose behalf they call.

## ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

### **EMD vs. EMS**

What's the difference? *Emergency Medical Dispatch (EMD)* is an advanced form of dispatch telecommunications based on specific medical training. This training makes the EMD a member of the medical community and, therefore, carries responsibilities in addition to those present in basic dispatch telecommunication. An EMD serves as a part of the local emergency medical services system.

<b>EMD</b>	<b>EMS</b>
Is an advanced form of dispatching	Is a system
Requires specific medical training	Includes all aspects of emergency medical services to the community
Serves as part of an EMS system	Includes prevention programs through rehabilitation of the patient

### **INSTRUCTOR NOTES**

**Discuss all of the responsibilities of the EMD.**

### **RESPONSIBILITIES OF THE EMD**

As an emergency medical dispatcher, you play a vitally important role in the EMS system. Some of your responsibilities are obvious while others are not. Your responsibilities as an EMD are discussed below.

1. *An EMD serves to receive and process calls for emergency medical services assistance.* Because of this, you must receive training in the use and handling of telecommunications equipment. This course does NOT provide that training.
2. *An EMD must determine the nature and severity of the medical incident type.* The dispatcher obtains the signs and symptoms and decides the specific chief complaint using the EMDPRS. The protocol will specify what type of response to send, and what instructions will be given to callers.
3. *An EMD is responsible for the coordination and dispatch of EMS resources.* EMDs coordinate and dispatch resources based on the pre-determined response configurations found in the local, medically approved EMDPRS. EMDs must know the resources available in the local system.



## ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

4. *The EMD will provide callers with emergency medical instructions by using the EMDPRS until personnel arrive at the scene.*
5. *An EMD relays pertinent information to responding personnel. Another responsibility is to relay information about the patient to the responding unit(s). This includes information about the patient's location and current condition.*
6. *The EMD attempts to ensure the safety of the patient, bystanders and responders. You are required to attempt to ensure the safety of patients and bystanders by warning them to remove patients from any immediate danger or prevent further injury if possible. This also includes advising responders of all potential hazards. The EMDPRS tells you when to do this.*
7. *Based on the instructions within the EMDPRS, an EMD provides instruction to a caller in order to help them prepare for the arrival of responders.*
8. *The EMD coordinates with other public safety and medical providers as required by the situation. Based on the situation, it may be necessary for you to contact other services (HAZMAT, poison control, utilities, etc.). It is up to you to know and refer to your local procedures for contacting other services.*

### **QUALITIES AND BEHAVIORS OF THE SUCCESSFUL EMD**

Knowing the responsibilities of an EMD is simply not enough to be successful at it. There are certain interpersonal qualities of EMDs that separate the successful EMD from the rest. Every caller you speak to should be treated professionally, regardless of the caller's demeanor.

1. *The successful EMD is helpful and compassionate.* Compassion for others and the desire to help are two of the most important characteristics of a good EMD. Professional EMDs treat their callers with respect and courtesy.
2. *The successful EMD effectively handles the emotional stress involved in caller/patient crisis situations and clearly guides callers in these situations.* Callers, patients, and even you may be in a higher state of anxiety. It is up to you to calm yourself, reassure and calm the caller and provide callers with instructions (medical or "pre-arrival") which give aid and comfort to the patient.
3. *The successful EMD masters the skills, philosophy, and knowledge of Emergency Medical Dispatch.* To be successful, you must learn and maintain the skills required for effective emergency medical dispatch. The EMD must be an active listener and always be alert to the caller's responses. This will improve communication, safety and patient care.

## ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

4. *A successful EMD effectively gathers information from callers, then prioritizes and consolidates that information into a useful format.* Multi-tasking skills are essential. While most calls are not life threatening, there are instances where time is a critical factor in the survival of the patient.
5. *A successful EMD assists EMS personnel in reaching the patient's location.* This would include specific locations within buildings, complexes, etc.
6. *The successful EMD determines the nature of the medical emergency without diagnosing the medical problem or condition.* By following the EMDPRS, you will identify the chief complaint and dispatch appropriate resources.
7. *Successful EMDs assist EMS personnel on the scene as requested.* Once responders arrive on the scene, you are to assist them by doing what they ask you to do.
8. *A successful EMD responds professionally to callers, making no judgments based on the caller's demeanor or past experience with the caller.* The EMD may not make subjective decisions about the caller or patient. The caller's demeanor can be deceptive.
9. *A successful EMD maintains confidentiality.* Under no circumstance are you allowed to give out confidential information about a patient or caller. This includes but is not limited to the patient's name, blood born pathogens, etc. **Check with your legal counsel about local regulations.** If someone requests information about a patient, refer to your agency's specific policy.

### **INSTRUCTOR NOTES**

**Discuss the three phases of the dispatch function.**

# ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

## **THREE PHASES OF THE DISPATCH FUNCTION**

### **PHASE 1 - CALL-RECEIVING ACTIVITIES**

In this phase, an EMD takes an incoming call and goes through a “caller interview” sequence. This sequence essentially allows the EMD to determine the exact location of the patient (**WHERE?**), the nature of the medical emergency (**WHAT?**), when it occurred (**WHEN?**), how it occurred (**HOW?**), to whom it occurred (**WHO?**). Based on the information received, the EMD can immediately go to the proper protocol located in the EMDPRS and continue on to the dispatch phase.

- EMD takes incoming call
- EMD engages caller in “initial interview” sequence (where, what, how, who, when)
- EMD then goes to proper EMDPRS protocol for further information

### **PHASE 2 - DISPATCH ACTIVITIES**

Questioning continues in this phase, and based on the information gathered during the call-receiving phase, the EMD turns to the proper protocol. The EMD dispatches EMS personnel to the scene in the proper, pre-determined mode and configuration.

- EMD goes to proper protocol.
- Protocols give appropriate response mode established by local medical authority.
- EMD dispatches response personnel in proper mode and configuration.

### **PHASE 3 - POST-DISPATCH ACTIVITIES**

Once resources have been dispatched, the EMD prepares the caller/patient for the arrival of responding EMS personnel. This could involve giving the caller pre-arrival instructions such as unlocking doors, securing pets, turning on lights, gathering patient medications, etc. It may also involve the provision of medical instructions as indicated by the EMDPRS. The EMD also updates the responding personnel with additional information as it is received.

- EMD prepares caller for responding personnel.
- EMD provides medical instructions as directed by the EMDPRS.
- EMD updates responding personnel.

## ***Chapter One: ROLES AND RESPONSIBILITIES OF THE EMD***

**NOTE:** Your call processing should follow a smooth pattern and logical flow. Normally the process begins with initial entry-level questioning, followed by specific key questions. Once this information is obtained, the EMD can make a decision on unit response configuration and mode and dispatch units to the scene. You can now return to the phone and begin the pre-arrival and/or, post-dispatch instructions required for the situation.

# **CHAPTER TWO: OBTAINING INFORMATION FROM THE CALLER**

## **OVERVIEW**

This chapter identifies the philosophy of Emergency Medical Dispatch and your responsibility when dealing with callers. It also provides an overview of events that may occur while handling a call. One of the most important parts of your job is obtaining proper information from callers in order to determine the nature and severity of the emergency.

## **INSTRUCTOR NOTES**

**List the objectives.**

## **OBJECTIVES**

- 2.1 List the Four Commandments the EMD is required to ask a caller during the “initial interview” of a call.
- 2.2 List the five key elements of information an EMD should obtain during the initial interview assessment.
- 2.3 List/explain the four key functions of the EMD in call taking.
- 2.4 List the basic telephone techniques that enhance communications.
- 2.5 Define and describe the hysteria threshold and the different syndromes.
- 2.6 Describe the various calming techniques.
- 2.7 List and describe special problems faced by the EMD.
- 2.8 Describe proper techniques when handling special problems with callers.

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

### **INSTRUCTOR NOTES**

**Emphasize the importance of confirming addresses even with the enhanced systems.**

### **PHASE 1- CALL-RECEIVING ACTIVITIES**

In this phase, an EMD takes an incoming call and goes through an “all-caller interview” sequence. This sequence essentially allows the EMD to determine the location of the patient (**WHERE?**), the nature of the medical emergency (**WHAT?**), when it occurred (**WHEN?**), how it occurred (**HOW?**), and to whom it occurred (**WHO?**). Based on the information received, the EMD can immediately go to the proper protocol located in the EMDPRS and continue on to the next dispatch phase.

The “Initial Survey” is included in Phase 1.

#### **Four Commandments**

1. Chief complaint (What)
2. Conscious
3. Breathing
4. Age

### **INSTRUCTOR NOTES**

**List/Discuss the four functions of the EMD.**

### **FOUR KEY FUNCTIONS OF THE EMD IN CALL TAKING**

1. *The EMD must keep the caller calm and maintain control of the conversation.* Calming the caller and maintaining control of the call, will enable the EMD to gather the information needed to make appropriate dispatch decisions.
2. *The EMD must determine the appropriate medical protocol card and the necessary instructions.* The correct EMD protocol card is determined by the information received about the patient.
3. *The EMD is responsible for maintaining contact with the caller.* A dispatcher is required to keep the caller on the line to elicit all information necessary to dispatch an appropriate response, ensure the safety of the responders, caller or patient, and to provide updates or additional information as needed.

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

4. *The EMD is responsible for dispatching the appropriate units.* Dispatch is determined by the EMDPRS and the information obtained from the caller. Once the needed information is obtained, the EMD will initiate the dispatch.

### **ELICITING AND RECORDING INFORMATION & CONDUCTING THE INITIAL INTERVIEW**

Asking the right questions, in the right way, getting the right responses and documenting them, are some of the most important parts of a dispatcher's job. Experience has shown that using the EMDPRS is a more reliable method for obtaining the information you need to make a dispatch decision, than simply asking the caller what is wrong.

#### **INSTRUCTOR NOTES**

**List the where, what, when, how, and who, then discuss each one.**

#### **STRUCTURE INITIAL INTERVIEW**

Conducting the initial interview is done the same way, every time. The procedures and questions you use are given to you in your EMDPRS, but the following information should be gathered. Gathering and recording this information is the "initial interview assessment." The information that should be gathered is Where, What, When, How, and Who.

**Where?** Obtain the exact location (including the city) of the patient and a call-back number first. Verification is best accomplished by having the caller restate the information. ***Do this even if you are using an E9-1-1 system or CAD (computer-aided dispatch) terminal.*** Be aware that the location of occurrence may be different than the patient's location. The EMD will need to find out where the incident happened (or is happening).

**NOTE:** On some 9-1-1 enhanced systems (E9-1-1), the address and phone number of the caller is automatically supplied. You must confirm that this information is correct.

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

**What?** Begin by asking the four commandments mentioned previously in this chapter. Obtain information about what has happened to determine what the *chief complaint* (nature of the problem) is. Patients with multiple complaints will most frequently identify the chief complaint first and then go on to list the secondary complaints. Many of these will be symptoms of the chief complaint. Asking “What’s wrong?” often confuses the caller and causes them to assume EMDs are asking for a diagnosis. Ask questions that elicit short and descriptive responses from the caller. They are the EMDs eyes at the scene, so ask them “What do you see? Tell me what is happening.” When a caller presents you with multiple chief complaints that seem to have no relationship with each other, you need to select the one that has the most potential to worsen or that has the highest priority symptoms.

**When?** Obtain information about when the incident happened. This information can help determine the response and may be useful to responding personnel.

**How?** Knowing how an injury occurred (sometimes referred to as the "mechanism of injury") can provide some valuable insight into the response required and scene safety issues.

**Who?** Obtain relevant information about the caller, patient and others associated with the incident. This information can be useful for the responding units.

### **BASIC TELEPHONE TECHNIQUES**

Below are some telephone techniques the EMD can use that will enhance communications.

- 1) *Ask the caller to get the telephone as close to the patient as possible.* Knowing the type of telephone available will aid in providing patient care instructions (ie cordless, cellular, land line).
- 2) *Speak directly into the telephone.* This ensures clearer communications.
- 3) *Take control of the conversation.* Direct and focus their attention to answering your questions using a clear, calm tone of voice. Don’t let the caller ramble.
- 4) *Picture the situation in your mind.* Trying to imagine what is happening at the scene will help while dealing with the caller.
- 5) *Document pertinent information the caller gives.* Listen and record what the caller is saying. This eliminates repetitive questions. Relay information to the responders if necessary.
- 6) *Explain waiting periods to the caller.* A caller who is waiting for help is very anxious. Long periods of silence exaggerate their feelings of fear. Explaining waiting periods helps to calm and reassure the caller.
- 7) *Show interest in each caller.* Ask for the caller’s name and use it frequently and repeatedly to help calm them. Personalizing the call in this way also helps the caller realize that you are concerned and want to do what's best for them and the person they are calling about.



## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

### **CALLER PROFILES**

**Speech/Hearing Impaired Callers:** The dispatcher's communications skills may be challenged

*Remember, the caller will probably be in a higher state of anxiety than you. Also keep in mind that these people usually don't interact with people outside of their own communities, so they may not know how to effectively communicate with you.*

*Impaired persons may not frequently interact with persons outside of the deaf community. Therefore they might be reluctant to request emergency services and wait longer to ask for help. In this situation, the request becomes more urgent.*

*If a caller is deaf, he or she may not realize when help has arrived. It is critical that you stay on the line with them until help has arrived and provide them with continuous updates. It may also become necessary for you to interpret for the responders. Actual protocols to follow will be set by your local agency.*

*Speak slowly and clearly to callers who have difficulty hearing. DO NOT TALK DOWN TO THEM. They are able to understand what you tell or ask them, they just can't hear you very well.*

*If you receive a call and you cannot understand the caller very well, do not assume that person is intoxicated. The caller may have a speech impediment, be suffering a stroke, or could be a diabetic with low blood sugar. Ask them to slow down and remain patient. Tell them you will remain on the line with them for as long as it takes to get them the appropriate response. You may want to repeat what you hear to them, so they can tell you if it is correct.*

<b>NOTE:</b> Review the local TTY call procedures and policies with your instructor. He or she will discuss your local policies at this point in the course. Feel free to ask questions.
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**The Americans With Disabilities Act.** By requirement of the Americans with Disabilities Act of 1990, as of January 26, 1992, all public entities providing emergency telephone services have been required to be accessible to persons with severe speech or hearing disabilities.

**English as a second language.** Callers whose primary language is not English, or those with a poor command of the language, may not be able to respond properly to instructions. A caller's ability to follow instructions can be determined during the interview process. In most places, access to language translator services are available (like that available from AT&T). In non-English speaking families, the school-aged child may be the most fluent in English and may have been chosen to be the translator.

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

### **INSTRUCTOR NOTES**

**Discuss the special concerns when dealing with children as the caller.**

**Children Callers:** For the safety and welfare of the child, determine if the child is alone with the patient. Below are considerations when dealing with children.

- 1) When faced with a crisis, children often appear to be very calm. This is because they generally do not understand the gravity of the situation. Remember not to judge the severity of the call by the level of emotion expressed by the caller.
- 2) Children often report "something is wrong with my..." or "...is sick and needs help."
- 3) Children will commonly refer to someone who is unconscious as being asleep. Treat this as an unconscious patient.
- 4) Children are very capable of answering questions and following instructions. Ensure questions are asked **one-at-a-time** so the child is not confused. It may be necessary to repeat or rephrase the questions in order to simplify it for the child. Be sure the child is not answering "yes" out of reflex to an authority figure.
- 5) Children callers often get anxious or nervous when it seems to be taking too long for an ambulance to arrive. Continually reassure them that help is coming.
- 6) A child's anxiety may relate to concern about who will take care of them or fear that they might be responsible for the crisis. Remember to reassure and praise them for making the right call.

**Calls Concerning Pediatric Patients:** It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific the signs of illness may be, this may include irritability, crying, vomiting, fever and lethargy. The complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, meningitis, child abuse, or simply an ear infection. Asking, "How is the child now?" or "What is the child doing now?" can help the parent give you a better picture of what is happening at the moment. Because a child's symptoms are often nonspecific, even an experienced pediatric provider will have difficulty discriminating between these conditions in person. The toddler or child's level of activity can sometimes be the most helpful gauge on the urgency of the situation.

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

Most of the calls received concerning children will be from their parents or other caregivers. Although parents are discerning and detailed observers of their children, they are not often medically trained. Furthermore, parents are emotionally entangled in their child's condition in ways that limit their abilities to reason and respond logically without direction. Whether or not they have contributed to their child's condition, parents are likely to feel guilty and may also feel angry, frightened, or powerless by what is happening to their child.

All of these considerations contribute to the difficulty of telling whether a child is having an emergency or not. Triage, a system used for sorting patients to determine the order in which they will receive medical attention, is a standard strategy practiced by pediatricians, nurse practitioners, and family practitioners. Triage of pediatric patients by EMD should reflect this understanding.

Questions can best be posed in the context of providing what they need and telling them how they can help, in a calm fashion. For example, "I am sending help, and I will stay with you until help arrives. Listen carefully, you can help by telling me..."

Finally, providing emergency care for children can be distressing even for the most experienced of EMS personnel, particularly if the outcome of the crisis is poor. Critical incident stress management for such events is increasingly acknowledged to be of great help.

### **THE HYSTERIA THRESHOLD.**

There is a phenomenon that occurs with emergency situations referred to as "The Hysteria Threshold." This is defined as *"the caller's emotional state that prevents them from being focused in the interview process."* Until you can break through a caller's hysteria threshold, there is no way you can control the call.

Remember that the caller's emotional status is not a clear indication of the medical problem's severity. You must adhere to the questions found on the protocol and make decisions based on the symptoms that are reported and the existence (or absence) of symptoms that indicate the need for a high priority response.

### **INSTRUCTOR NOTES**

**The percentage of callers in true hysteria is relatively low. The importance of being able to handle the callers is crucial.**

## **Chapter Two: OBTAINING INFORMATION FROM THE CALLER**

### **HYSTERIA SYNDROMES**

Some events that may cause the caller's (and in some cases the dispatcher's) emotional state to escalate are defined below:

- a) *"Recurrent Hysteria" syndrome:* After calming down enough to talk to the EMD, the caller is told to get the phone as close to the patient as possible. When once again faced with the seriousness of the situation, the caller may become hysterical again.
- b) *"It's not working" syndrome:* The caller panics at failure of initial attempts at resuscitation.
- c) *"Telescoping of time" syndrome:* The caller panics because s/he perceives that events are taking longer than they should. The perception is that the responders aren't coming.
- d) *"Secondary Patient" syndrome:* The caller realizes what could have been a tragic outcome has been avoided and breaks down emotionally from the strain.
- e) *"Tertiary Patient" syndrome.* After dealing with a particularly stressing call, the dispatcher may feel physically and emotionally drained. This happens to all EMDs; it is important to understand that help is available (friends, family, coworkers, and agency stress management resources). Refer to Chapter Six, CISM.

### **CALMING TECHNIQUES**

A person who makes a call for emergency medical assistance will have a range of emotions from calm to hysterical. The following techniques can be used to control the call and obtain the needed information.

1. Use medically approved interview protocols found in your EMDPRS.
2. Use a confident calm voice, professional demeanor and dispatch skills. Also use repetitive persistence. This is a command or request from the EMD to the caller, accompanied by a reason for the request. The request or the reason is repeated verbatim until the request or action is carried out by the caller, and
3. Ask for and frequently use the caller's name throughout the call.

Utilizing these techniques will reassure the caller and make them more comfortable.

### **INSTRUCTOR NOTES**

**Describe the common sequence of events.**

## ***Chapter Two: OBTAINING INFORMATION FROM THE CALLER***

### **COMMON SEQUENCE OF EVENTS**

There is a common sequence of events that you will face when dealing with callers. This sequence is listed and described below.

- 1) The caller objects to being questioned.
  - a) Upon answering a call, the caller may object to being interrogated. They may think you're trying to quiz them on their EMS knowledge!
  - b) Tell the caller you're going to help them. Explain to the caller that you are asking all these questions because you need to know what is happening so you can send the proper resources.
- 2) The caller reaches the "hysteria threshold."
- 3) The EMD uses calming techniques to break through resistance and overcome the caller's "hysteria threshold."

### **INSTRUCTOR NOTES**

**Discuss each of the special problems.**

### **SPECIAL PROBLEMS**

- 1) *Simultaneous emergencies.* There will be times when you will get more than one emergency call at a time. In this type of situation, it is best to take good notes and prioritize calls in terms of medical urgency (according to your EMDPRS and agency's policies).
- 2) *Confusing information.* If verification is needed have the caller repeat the information. Consider rewording the question to clarify information.
- 3) *Insufficient information.* If, after dealing with a caller, you find that you don't have enough information, or the responding units need further information, then you need to be able to reach the caller, so always get a "call back" number.
- 4) *Unknown problem.* In situations where the problem cannot be determined, send a response based on local protocols.

# **CHAPTER THREE: RESOURCE ALLOCATION**

## **OVERVIEW**

After receiving calls and determining the proper response levels for them, EMDs must allocate resources appropriately.

This chapter presents the basic structure of the local EMS system and general information regarding resource allocation. You will be presented with information regarding general response categories and the principles of successful resource allocation.

## **INSTRUCTOR NOTES:**

**State the Chapter objectives**

## **OBJECTIVES**

- 3.1 Describe the resources available in the local EMS system
- 3.2 Describe local, pre-configured response modes
- 3.3 Describe the tiered EMS system
- 3.4 Describe how to properly allocate resources
- 3.5 Determine the appropriate resources to be allocated by considering such factors as:
  - 3.5.1 Nature of the problem
  - 3.5.2 Personnel and vehicles available
  - 3.5.3 Vehicle proximity to the patient
  - 3.5.4 Ambulance coverage zones
  - 3.5.5 Types of equipment and trained personnel carried by each resource

## ***Chapter Three: RESOURCE ALLOCATION***

### **RESOURCES COMMONLY FOUND IN AN EMS SYSTEM.**

Each EMS system is different. All members of the EMS system interact differently in one locale and may or may not even exist in another. In general, EMS systems contain the following resources:

#### **1. EMD**

**EMDs** are not an allocated resource, however, they are the first to administer medical assistance.

#### **2. First Responders**

**Law Enforcement Officers** – Officers may receive basic first aid, and/or EMT training. They frequently assist responding personnel in reaching patients and providing scene safety.

**Fire Personnel** – Firefighters are often part of the local EMS system because many agencies have fire fighters trained as EMTs.

#### **3. Basic Life Support (BLS)**

**EMT** – EMTs provide immediate treatment and stabilization for patients and assistance for ALS responders. They may also provide transport.

#### **4. Advanced Life Support (ALS).**

**EMT-I (Intermediate)** – These individuals, while not as highly trained as paramedics, are trained in defibrillation, breathing support methods, (like endotracheal intubation), and are also trained in establishing intravenous lines for delivery of fluids.

**Paramedics** – Paramedics are trained in advanced cardiac life support, EKG interpretation, and are certified to establish intravenous lines, and administer medications under the direction of medical control. They are also trained in advanced airway maintenance techniques such as endotracheal intubation.

#### **4. Air-medical Services**

These are usually hospital based, ALS helicopter services staffed by paramedics and nurses. These resources are used in the most severe cases where transport time to the hospital may be the determining factor in patient survival. They are also utilized in remote areas where EMS ground transport units have difficult access.

## ***Chapter Three: RESOURCE ALLOCATION***

### **5. Hospital/Emergency Care Facility**

Hospital emergency departments and other emergency care facilities are included in most EMS systems. These resources include trauma centers, burn centers, pediatric/neonatal centers, psychiatric centers, and hyperbaric chamber facilities.

Critically ill/injured patients may benefit from receiving care at facilities with specialized resources. These facilities may not be the nearest hospital, therefore consideration for developing, and supporting a system of care that gets the injured or ill person to the right facility as quickly as possible should be built into dispatch protocols. This may involve factors such as helicopter or fixed-wing transport and pre-existing triage and transfer agreements, both intra and interstate.

### **6. Other**

Other resources available include hazardous materials teams (HAZMAT), rape crisis and domestic violence centers, poison control centers, language translator services, utility companies, The American Red Cross, etc.

## **INSTRUCTOR NOTES**

**List and describe the objectives to accomplish successful resource allocation.**

**Tell students what proper allocation depends on.**

## **TIERED EMS SYSTEM STRUCTURES**

**Tiered EMS System Structures.** This system is broken down into layers or “tiers.” Each tier has a different level of response based on local EMS system design. In general there are four tier types.

1. **Tier 1.** First responders
2. **Tier 2.** Basic Life-Support (BLS)
3. **Tier 3.** Advanced Life-Support. (ALS)
4. **Tier 4.** Air-Medical Services.



## Chapter Three: RESOURCE ALLOCATION

### RESPONSE MODES AND RESPONSE CONFIGURATIONS

There are two things to know in order to understand how to use the configurations found in the EMDPRS. These are *response modes* and *response configurations*.

There are two types of **response modes**, "*Hot*" or "*Cold*."

- 1) "*Hot*" responses can be called many things. One popular way to refer to a "hot" response is "going lights and siren." The *Uniform Vehicle Code and Model Traffic Ordinance* refers to the "Hot" response as the "Emergency Response Mode".
- 2) "*Cold*" responses are also called "going cold." These responses require a normal traffic response. This means the responding units get no special driving privileges, like using their siren, or legally exceeding the speed limit in order to reach a patient.

### FOUR GENERIC RESPONSE CONFIGURATIONS

- 1) "*BLS Cold*" is a resource with basic life-support capability dispatched and told to respond in a normal response mode (no lights or siren).
- 2) "*BLS Hot*" is a resource with basic life-support capability dispatched and told to respond in an emergency response mode (using lights and siren).
- 3) "*ALS Hot*" is a resource with advanced life-support capability dispatched and told to respond in an emergency response mode (using lights and siren).
- 4) "*FULL Response*" is when "everything rolls" using the emergency response mode (using lights and siren).

Response modes are used by the agency's medical advisor to determine **response configurations**. Because they are determined in advance, they are usually called "predetermined response configurations." The type of unit and what response mode it will use has been decided in advance by the medical advisor in conjunction with other EMD advisory personnel. These configurations are based on a resource, its capabilities, and personnel, and on the time factors needed for the medical complaint. In general, there are four response configurations.

## ***Chapter Three: RESOURCE ALLOCATION***

### **FACTORS IN PRE-DETERMINED RESPONSE CONFIGURATIONS**

Your local medical advisor sets up the configurations based on the following things:

- 1) *Time and Outcome* - Will time make a difference in the outcome? Will getting there faster be that much help to the patient?
- 2) *Time Savings* - Will time to the patient be reduced by using the "hot" response mode (Emergency Response Mode - ERM)? Will using the emergency response mode save time?
- 3) *Time and Proximity* - Will time be saved by using resources closer to the patient in a Normal Response Mode ("Cold"). Would it be faster to use a resource further away, but have them use Emergency Response Mode ("Hot")?

### **SUCCESSFUL RESOURCE ALLOCATION**

**Objectives in Allocation.** EMDs must first consider predetermined response configurations and modes for the local area where they work. Allocation of resources depends on your ability to accomplish a specific set of objectives. Your objectives are to:

- 1) *Obtain the proper information.* By using the local EMDPRS, you can get the information you need for effective resource allocation.
- 2) *Maintain an accurate resource inventory.* You need to keep up-to-date records on the resources available to you.
- 3) *Identify situations that require specific types of assistance (HAZMAT, high-rise rescue, etc.).* The EMDPRS will help you identify these.
- 4) *Identify situations requiring telephone patching.* Specific situations like crisis-intervention and poison-control calls may require you to do this.
- 5) *Determine the best routes for dispatched resources to follow to reach a patient.* This comes from a thorough knowledge of the community in which you work. It is your job to get this familiarization.
- 6) *Be familiar with local resource capabilities.* Knowing what each resource is capable of is very important in helping you decide whom to send.
- 7) *Identify the hospital where a patient will be taken.* This allows you to set up communication or telemetry lines, if needed.
- 8) *Identify the nature and severity of the problem.* Proper interrogation procedures and use of the EMDPRS will help you do this.

## ***Chapter Three: RESOURCE ALLOCATION***

9) *Determine if multiple units (or mutual aid) are needed.* This is based on the urgency and severity of the medical situation, number of patients and location or proximity.

10) *Identify the proper response mode for all calls.* Response modes are preconfigured for you in your EMDPRS for each medical complaint type. Response modes you will usually hear about are "Hot" and "Cold" (More on these later.)

**NOTE:** Not all areas use these four generic response configurations. Some areas have more, others less. What is important to remember is that response configurations are determined by local authorities, based on local resources and may differ from agency to agency.

### **WHAT DOES PROPER ALLOCATION DEPEND ON?**

Proper resource allocation depends on a variety of factors. These factors are listed below:

- 1) Predetermined response configurations based on local needs and resources;
- 2) Type and severity of the emergency;
- 3) Resources, equipment types and personnel available;
- 4) Proximity of the resource to the patient;
- 5) Response time to the patient;
- 6) Caller's needs; and
- 7) Victim accessibility.

### **INSTRUCTOR NOTES**

**Tell students that response configurations are designed based on:**

- 1. Time and outcome**
- 2. Time savings**
- 3. Time/proximity**

**Discuss the two most common response modes.**

**Define/describe response configurations and how they are determined.**

**Describe the four generic response configurations.**

## ***Chapter Three: RESOURCE ALLOCATION***

**Describe the tiered EMS system.**

**Describe the principles of successful resource allocation.**

### **PRINCIPLES OF SUCCESSFUL RESOURCE ALLOCATION**

When allocating resources, several things determine whether or not you will do so. These principles include the following. Some you may already recognize.

- 1) *Knowledge of the status of all your resources at all times.* Are they working? Are they in the shop for repair? Is one group out for training?
- 2) *Sending the closest unit(s) that will meet the need.* Is the nearest unit capable of meeting the patient's medical needs?
- 3) *Sending the appropriate resources to meet the need.* ALS vs. BLS, Multiple vs. Solitary responders. Other resources as available in your local system.
- 4) *Understanding the influence of proximity and response time on the outcome.*
- 5) *Determining how easy it is to reach the victim before sending out units.* You need to know if the victim is in an easily accessible place. For example, if the victim is located in a remote ravine after a four-wheeling accident, should you send the two-wheel drive units out? Air ambulance?
- 6) *Knowing the availability of first responders, other agencies and multiple units for quick responses as the situation requires it.* What other resources are available that meet the need?
- 7) *Having backups for resources that are "out-of-service."* Having additional backup resources are very popular in systems that engage in fluid deployment, system management and station or zone coverage deployment strategies.
- 8) *Determining need based on clinical or medical criteria found in your EMDPRS.* What exactly is the patient's medical need? What does the EMDPRS say?
- 9) *Using EMDPRS recommendations to determine response configuration and mode.* You will find these recommendations in the EMDPRS. They have been predetermined by your local medical authority to be most effective.

### **INSTRUCTOR NOTES**

**Review the local medical resources.**

**Ask students to identify resources available in their EMS system.**

## ***Chapter Three: RESOURCE ALLOCATION***

Following is a list of some of the more common medical resources:

- 1) Hospitals
- 2) Medical, burn, trauma, or crisis, Hyperbaric Chamber facilities
- 3) Advanced life-support/paramedics
- 4) Basic life-support/advanced EMTs
- 5) Rescue squads/extrication units
- 6) Helicopters/air ambulances
- 7) Ground ambulances

**QUESTION:** What are some of the resources available in your local EMS system? The instructor will review local resources and explain some of their unique capabilities.

### **INSTRUCTOR NOTES**

**Describe these additional resources and have students identify others they can think of.**

Most systems have additional resources to enhance their resource base. These resources are usually considered alternates, because they are not the main resources used; but are specialty resources and are used only in special situations. You should be familiar with the resources and procedures to access them, should they be necessary. Some of the more common alternatives are listed below. They include:

- 1) Special care facilities (burn centers, prenatal units, psychiatric centers);
- 2) Hazardous material response teams (HAZMAT);
- 3) Gas and electric utilities;
- 4) Police and fire;
- 5) Poison control;
- 6) Rape crisis or Domestic violence resource
- 7) Translator services (provide interpretation of various languages);
- 8) U.S. Coast Guard; and
- 9) Military Assistance to Safety and Traffic (MAST)

## ***Chapter Three: RESOURCE ALLOCATION***

### **INSTRUCTOR TEXT**

**Tell students it is very important that they learn resource capabilities for each resource and they should always know if the resource is available.**

Regardless of the resource (standard or alternative), your agency should always have information about the following for each resource:

- 1) Basic and special capabilities of each resource, and
- 2) Resource location and status.

**QUESTION:** What other types of things should you know about each resource available to you? Discuss these with your instructor and class.

# **CHAPTER FOUR: PROVIDING EMERGENCY CARE INSTRUCTION**

## **OVERVIEW**

This chapter will train you to provide emergency care instruction over the telephone. You will be presented with the philosophy behind the provision of emergency medical instruction, as well as information on how to carry out that process.

There are also sections included on your role in presenting telephone medical instruction, and some basic hints to help you effectively provide emergency care instruction to callers.

## **INSTRUCTOR NOTES**

**List the Chapter objectives**

## **OBJECTIVES**

- 4.1 Describe the proper way to provide emergency care instruction.
- 4.2 Describe the philosophy behind providing emergency care instruction.
- 4.3 List at least five requirements in creating effective communication between the EMD and the caller.
- 4.4 List the "helpful hints" that aid EMDs in the delivery of effective telephone medical instructions.

## ***Chapter Four: PROVIDING EMERGENCY CARE INSTRUCTIONS***

### **ROLE OF THE EMD IN PROVIDING TELEPHONE INSTRUCTIONS**

The EMD is a critical link in patient survival. This is so, because;

- The EMD is the first medical contact a caller has;
- The EMD is in the best position to determine the needs of the patient and provide appropriate instructions and;
- The EMD is able to initiate telephone CPR.

### **THE PHILOSOPHY OF EMERGENCY MEDICAL DISPATCH PROTOCOL REFERENCE SYSTEM (EMDPRS)**

Although most calls received are not life-threatening, the EMD will occasionally find it necessary to give medical instructions to callers. The EMD must therefore be ready to make decisions about which emergency care needs are required based on the information gathered from the initial survey of the caller and the EMDPRS.

**Why use the EMDPRS?** Because the EMD is not at the scene they must rely on the EMDPRS to determine what is happening. The use of a standardized and medically approved EMDPRS makes giving medical instructions consistent and accurate by giving callers the same information, in the same manner, every time. It then gives information about what resources to use and which medical instructions the caller may need.

When a situation arises that requires using medical instruction, the EMD must consider:

- 1) *Is it possible?* Is the caller a third-party caller (not with the patient, but reporting from some distance)? Is the phone near the patient? Are there language difficulties (you understand them, they don't understand you)?
- 2) *Is it appropriate?* The EMDPRS will tell you if there is any instruction that needs to be given. However, you must decide if it is needed *based on the situation*. In some cases, the responders might get to the patient before the instruction can be given.

### **INSTRUCTOR NOTES**

**List the five things that will create effective communication between the EMD and the caller.**

**Providing Efficient Medical/Pre-arrival Instructions.**



## ***Chapter Four: PROVIDING EMERGENCY CARE INSTRUCTIONS***

There are a few things that the EMD must do in order to provide efficient medical instruction. Many of these require preparation before they are actually needed. To perform at a high level of efficiency when giving medical instruction, an EMD must:

- 1) Refine his/her interview skills
- 2) Be familiar with medical and pre-arrival instruction cards
- 3) Practice giving the medically approved scripted instructions
- 4) Practice overcoming the hysteria threshold by using "repetitive persistence" and other calming techniques
- 5) Deliver instructions in a calm and reassuring manner
- 6) Be accurate
- 7) Be clear (speak slowly and enunciate properly)
- 8) Repeat instructions only when the caller doesn't understand the instruction or the EMD hasn't given the right information and
- 9) Listen carefully

**NOTE:** Practice ensures the consistent delivery of instructions necessary for patient survival. Your comfort level with your skills makes it easier to give good telephone instruction because you are calm and confident. Your calm and soothing manner then calms the caller and makes it more likely that the caller will relax and be willing to follow your instructions.

### **IMPORTANT ASPECTS OF PROVIDING EMERGENCY CARE INSTRUCTION.**

Remember that the role of an EMD is to gather specific medical information and prioritize responses by using the EMDPRS. To be effective, these three functions must be properly carried out:

- 1) *Obtain information and ask key questions from callers;*
- 2) *Dispatch appropriate resources and*
- 3) *Provide pre-arrival and post-dispatch instruction*

## ***Chapter Four: PROVIDING EMERGENCY CARE INSTRUCTIONS***

EMDs use the "*Case Entry Interview*" protocol to get information from callers, to determine initial dispatch criteria, and to find the appropriate card to turn to in the EMDPRS. These labels will vary by the EMDPRS selected for the local agency.

Once it is determined which protocol to use, the EMD should turn to that card. Each EMDPRS protocol card then lists more questions to ask the caller. The information gathered from these questions is used to supplement information already collected. These are found in the "*Key Questions*" and "*Additional Information*" sections of the card. They are designed to help obtain more information on the following:

- 1) *Additional (and/or clarifying) location information;*
- 2) *Further clarification of the nature and severity of the medical emergency;*
- 3) *Types of pre-arrival/post-dispatch instructions to give;*
- 4) *Additional information that should be relayed to responders;*
- 5) *Determination of the proper response mode;*
- 6) *Conditions that require pre-arrival instruction;*
- 7) *Details to help responders locate the scene;*
- 8) *Scene safety requirements for responders and bystanders;*
- 9) *Proper resources to alert;*
- 10) *Patient information relay to responders;*
- 11) *Details to help responders locate the victim; and*
- 12) *When to establish communication links between the caller and the responders,*
- 13) *And any additional resources that may be required (translator service, specialty resources like poison control, burn center, police, etc.).*

### **HELPFUL HINTS**

Below are some hints that will help make it easier to provide instruction to callers. They include:

1. *Keep the EMDPRS close at hand*
2. *Follow the protocol cards "word-for-word"*
3. *If you get the call from another agency, get the phone number of the location and **CALL BACK**.*  
*This might happen if you work for an agency where public safety dispatchers are not located in the same facility as you are.*

# **CHAPTER FIVE:**

## **LEGAL AND LIABILITY ISSUES IN EMD**

### **OVERVIEW**

Emergency medical dispatchers work under difficult conditions. The stress associated with the job comes from the nature of the calls and concern over legal issues that can arise from doing your job.

This chapter gives provides legal information regarding your responsibilities, and identifies areas of risk. You will be given some legal terminology, which you should become familiar with. And finally, information on how to avoid legal problems is presented.

### **INSTRUCTOR NOTES**

**List the objectives.**

### **OBJECTIVES**

- 5.1 Define liability.
- 5.2 Describe liability exemptions and dispatcher immunity.
- 5.3 Describe negligence and how courts determine negligence.
- 5.4 Define standard of care.
- 5.5 Describe abandonment.
- 5.6 Describe the two types of consent.
- 5.7 Explain and identify issues that surround confidentiality.
- 5.8 Explain litigation and how to avoid it.
- 5.9 Identify legal and liability issues that the EMD faces.

## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

### **BASIC LEGAL CONCEPTS**

As an EMD, you will deal with life and death situations on a daily basis. The last thing you should have to deal with is legal issues. In order for you to best learn ways to deal with legal concerns, you must understand the most common legal concepts.

**Liability.** Liability means that you are responsible for your actions. Liability is related to negligence, because after negligence is proven in court, liability is assigned to an individual. You and/or your agency can be held liable for damages that may occur as a direct result of negligent actions, practices or conduct.

### **INSTRUCTOR NOTES**

**Tell trainees the four things the courts use to define negligence.**

**Define duty.**

**Define breach of duty.**

**Define injury/damage.**

**Define proximate cause/causation.**

**Negligence.** Negligence is defined as "failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with the same or similar training) would act under the same or similar circumstances."

In most cases the person who files a lawsuit ("plaintiff") is seeking compensation ("damages") for damage ("injury") that they allege occurred. Provided that you follow the locally approved EMDPRS and standards, the risk of negligence is significantly decreased.

There are two types of negligence you will hear about, Simple and Gross. **Simple negligence** is defined as negligent conduct that was not purposeful or due to "malicious intent" (you didn't mean to do it). **Gross negligence** is defined as a negligent action that was undertaken with malicious intent (you meant to cause harm) and with willful disregard for the safety of persons and/or property.

**Proving Negligence.** "Intent to Harm" is not required to prove negligence. The best way to understand negligence is to learn how it is determined in court. To prove negligence, the court must determine four (4) things:

- 1) **Duty.** *Duty is the responsibility to act or perform according to established standards of care.* The court must show that some "duty to act" existed in the situation. The "duty relationship" begins when the EMD answers a call.

## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

- 2) **Breach of Duty.** To prove negligence, the court must show that there was a breach of duty. This means that you did not perform your duty (by acting according to the standard of care established by the community).
- 3) **Injury/Damage.** To prove negligence, the court must also prove that damage or injury was done to the patient. The type and amount of injury determines the amount of "damages" awarded to the victim.
- 4) **Proximate Cause/Causation.** The fourth criteria used to determine negligence is some determination of "causation." This means that the court has to show there is a direct relationship between the action taken by the EMD and the injury to the patient.

### **INSTRUCTOR NOTES**

#### **Define standard of care.**

**Standard of Care.** The standard of care for an area can be defined at any level of government; Local, State or Federal. Usually, the standard used in a court case is the standard used by the local community.

**Establishing Standard of Care.** The court generally uses four measures of conduct to determine the local "standard of care." These four measures are:

- 1) The EMD's behavior and conduct is judged in comparison to others with similar training and experience;
- 2) The EMD's behavior and conduct is judged in comparison to locally approved protocols and guidelines;
- 3) The EMD's behavior and conduct is judged in comparison to local or state statutes, local ordinances, case law or administrative orders that address the standard of care; and
- 4) The EMD's behavior and conduct is judged in comparison to professional standards published by organizations involved in the development of emergency medical service standards such as the National Academy of Emergency Medical Service Physicians (NAEMSP) and the American Society for Testing and Materials (ASTM).

## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

### **INSTRUCTOR NOTES**

**Describe abandonment.**

**Describe principled reasonableness.**

**Describe emergency rule**

### **OTHER LEGAL TERMS YOU SHOULD KNOW**

**Abandonment.** Simply put, abandonment occurs when care has begun, and then the provider leaves a patient who is known to be in a life-threatening condition. This includes **starting** treatment and then letting someone with less training take over resulting in further injury or decline in the patient's condition.

**Principle of Reasonableness.** This refers to what a "reasonable person" would do when faced with the same or similar situation.

**Emergency Rule.** The Emergency Rule states that "one who is faced with an emergency cannot be held to the same standard of conduct that he/she would otherwise be held to when not faced with such a situation." Simply put, when you face an emergency, you can't be expected to act the same as you would if the emergency situation was not there. It is based on the "principle of reasonableness."

### **INSTRUCTOR NOTES**

**Describe foresee ability and its relations to the EMDPRS.**

**Briefly review detrimental reliance.**

**Describe damages both compensatory and punitive.**

**Foresee ability.** "Foresee ability" refers to the fact that you must rely solely on the information you get from callers (you can't actually see what is happening at the scene). If on-scene findings (by the resources you dispatch) are different (more serious) than those reported by the caller, then you are not liable, *provided you followed the local EMDPRS for the reported chief complaint type*. Like the Emergency Rule, it is also based on the "principle of reasonableness."

**Detrimental Reliance.** A person expects that a certain action will be taken based on the fact that it has been reported in the media ("it was done before for other people"), public education or through simple reasonable expectation. If this action does not occur, then the person can claim that they "relied" on the system to act in a certain way, and by doing so it ended up hurting them.

**Damages.** Anything awarded to winning plaintiffs. In negligence lawsuits, damages can be both "compensatory" and "punitive." *Compensatory damages* are those that involve repaying plaintiffs for money they have lost (lost wages due to lost workdays, hospital/medical bills, etc.). *Punitive damages* are those used to punish a defendant.

## Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD

### INSTRUCTOR NOTES

**Define consent.**

**Describe local laws: this requires review and preparation prior to class.**

**Consent.** Consent refers to permission to treat the sick or injured. You will usually hear about two (2) types: Implied and Actual. ***Implied Consent*** refers to situations where if patients are unconscious and can't respond, it is safe for us to assume that they would want to be helped. ***Actual Consent*** is direct verbal or non-verbal communication to someone giving aid.

**Immunity.** Many states have "Good Samaritan" laws. *Ask your instructor about this.*

Note: **Good Samaritan Laws do not apply to you while on the job.** There may be local or state laws that protect you, but the "Good Samaritan Laws" don't apply under any circumstance

### INSTRUCTOR NOTES

**Describe governmental immunity.**

**Tell students what they can or can't reveal about patient.**

**Governmental immunity** is found in some cities and states. This immunity comes from 9-1-1 or EMS laws and usually applies only in cases of "simple negligence" where there was no "malicious intent." These laws do not apply to EMDs in private agencies.

### PATIENT CONFIDENTIALITY

**Issues in confidentiality.** You are expected to maintain confidentiality. Patients have the right to expect that any information they give you will be kept confidential. In terms of confidentiality, you:

- 1) can't relay information about patient names;
- 2) can't talk about what *the patient* said;
- 3) can't talk about unusual behaviors that are not related to the medical condition unless danger exists (to responders); and
- 4) can't talk about aspects of a patient's lifestyle. (Review HIV laws)

Only information that is relevant to determine the proper medical response, related to scene safety, patient complaint and condition can be relayed.

## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

### **INSTRUCTOR NOTES**

**Tell students that these are legal issues they should be concerned about.**

**Provide examples and clarification for each if possible.**

### **APPROPRIATE CONCERNS AND DANGEROUS PRACTICES OR BEHAVIORS**

**What to be concerned about.** The following are dangerous EMD practices and behaviors with which you should be familiar:

- 1) Failing to send emergency medical responders when requested;
- 2) Subjective judgment of caller credibility;
- 3) Subjective judgment of the validity of caller's chief complaint;
- 4) Argumentative or combative attitude on the part of the EMD;
- 5) Allowing prejudices to affect objective decision making;
- 6) Giving medical instruction without using locally approved EMDPRS;
- 7) Failure to train and be certified as an EMD;
- 8) Not giving instructions when they are needed and you have a protocol for it; and
- 9) Relaying confidential information to unauthorized persons. (HIV issues).

### **INSTRUCTOR NOTES**

**Discuss avoiding liability.**

**Describe individual methods.**



## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

### **AVOIDING OR REDUCING LIABILITY (RISK MANAGEMENT)**

**Avoiding Liability.** In an effort to avoid liability, it must be approached at two levels -agency and individual. Remember, avoiding liability means being able to avoid being found liable in a court of law.

**Individual Methods.** In addition to the methods described above, there are ways that you (as an individual) can avoid liability. These methods are described below.

- 1) Avoid inappropriate behaviors that have been described in this Chapter and in previous Chapters.
- 2) Actively participate in Quality Assurance and continuing dispatch education programs.
- 3) Seek and obtain certification as an EMD.
- 4) Follow the EMDPRS and the policies, procedures and practices established by your agency and the local community.
- 5) Strictly adhere to the protocols and training of the EMDPRS.
- 6) Report any problems or problematic situations as soon as possible and in writing.

### **INSTRUCTOR NOTES**

#### **Describe agency methods.**

**Agency Methods.** Agencies can use the following methods in an effort to avoid liability. Look for these types of policies and procedures in your agency:

- 1) Existence of well-defined screening and hiring procedures, used in an effort to select the best candidates for EMD.
- 2) Use of a well-organized, written orientation and training program for new employees.
- 3) Regular and objective progress reports given to probationary personnel.
- 4) Clearly defined job expectations and work descriptions.
- 5) Regularly reviewed and updated policies and procedures.
- 6) Proper EMD training and certification provided.
- 7) Appropriate implementation of an EMD program.

## ***Chapter Five: LEGAL AND LIABILITY ISSUES IN EMD***

- 8) A well-managed EMD program.
- 9) Existence of a formal relationship with a physician who gives medical direction to the EMD program.
- 10) A quality assurance/quality improvement (QA/QI) program implemented for dispatch.
- 11) Existence of an on-going, regular continuing dispatch education program (CDE).
- 12) Budgets that allow for QA/QI improvements (including updating training materials and providing personnel and overtime required to carry out these functions).

### **INSTRUCTOR NOTES**

**Conduct team analyses.**

**Exercises at the end of this Chapter.**

## **TEAM ANALYSES**

### **MATERIALS:**

4 case studies  
Chart paper  
Easel  
Colored markers

### **APPROXIMATE TIME TO COMPLETE:**

45 minutes

### **NOTE TO THE INSTRUCTOR:**

On the following pages of the Instructor Guide you will find two sample scenarios. These scenarios are provided as examples of how you may want to design your scenarios for use in class. They are by no means definitive, and you are free to develop scenarios as you want. You may even decide (if money and time are available) to create a video or audiotape of a call for use here. The possibilities are endless.

The only requirements for your scenarios are:

1. A complete text/script of a request for EMS services.
2. A copy of scenarios for each of the trainees to read.
3. Instructor notes for each scenario objective.

As you develop your scenarios, consider creating a list of topics for the trainees to review. You may even decide to include these topics at the end of the trainee copies to help them focus on the relevant issues. Your copy should at least have a list of things you want the trainees to discuss.

### **INSTRUCTIONS:**

1. Divide the class into four teams (as evenly as possible.)
2. Pass out the cases to the trainees. There are two scenarios.
3. Tell trainees to read each case study (10 minutes to read them all). Assign each team one case study to read and discuss.
4. Tell each team to read the scenario that they are assigned and to discuss the legal and liability issues (if any) that are present.

5. Tell teams that they have 20 minutes to read the scenario and prepare team answers that:
  - a. Identify the legal/liability issues that are present.
  - b. Identify how to solve the problem, and
  - c. Identify methods to prevent this from happening again (risk management techniques that will help prevent this in the future).
6. After 20 minutes pass, call time.
7. Each team now gets 5 minutes to present its findings to the rest of the class and respond to questions presented by the other teams.
8. After each team has presented its findings, tell the class what really happened with the case, including if it went to court, how it was adjudicated, and ways to identify the issues that could be prevented.

Sample scenarios are presented on the following pages.

# Scenario One

## CALL #1 – Citizen #1 calling EMD

### SCRIPT

**BACKGROUND-** The following calls were received from an area of town having many college student housing complexes. Several calls were placed for this incident in a short time span.

Day of week: Sunday

Time of day: 01:00

**EMD:** Paramedics

**Reporting Party One:** Yea, we have someone here hyperventilating and we don't know what to do with her. (*RP one has very slurred speech.*)

**EMD:** What's the address there?

**Reporting Party One:** 6545...

**EMD:** Yes

**Reporting Party One:** ...we don't want an ambulance, we just need to know how to treat it.

**EMD:** Ok, well what you need to do is call an emergency room if you're just looking for treatment. All I can do is send you an ambulance, sir.

**Reporting Party One:** Ok...

**EMD:** What is she doing?

**Reporting Party One:** ...we're not paying for an ambulance.

**EMD:** Well, what is she doing right now?

**Reporting Party One:** She's hyperventilating.

**EMD:** Why?

**Reporting Party One:** I don't know why.

**EMD:** Can I speak with her?

**Reporting Party One:** Sure.

**Reporting Party Two:** Excuse me, ma'am. (*RP Two also has slurred speech.*)

**EMD:** Yes.

**Reporting Party Two:** Ok, we have a person that's... ah... hyperventilating and but yet she has been drinking a lot and in mass quantities. She fell and hit her head, possible concussion.

**EMD:** Ok.

**Reporting Party Two:** But...

**EMD:** So she's having difficulty breathing?

**Reporting Party Two:** She will not...she will not stop breathing hard and it's like when you're ah...

**EMD:** How old is she?

**Reporting Party Two:** bent over and you're cramping.

**EMD:** How old is she, sir?

**Reporting Party Two:** She's twenty-two...and I don't know how to treat her. I've had CPR, but I've never had this.

**EMD:** Ok, she doesn't need CPR if she's breathing.

**Reporting Party Two:** Yea, but she's...

**EMD:** Is she conscious?

**Reporting Party Two:** Yea, well ah barely... would it be better if she wasn't?

**EMD:** No, not at all, what's your address there?

**Reporting Party Two:** Ah...Gail what's your address? I just...we're visiting so... I just need the treatment.

**EMD:** Yes, I need your address, sir, she needs medical attention.

**Reporting Party One:** Hey listen, I've been through butting you medical people before...

**EMD:** Sir, she needs medical attention.

**Reporting Party One:** Well, apparently so, but I've been screwed by it before and I'm not willing to pay unless it's a life-threatening thing. She really does need help right now.

**EMD:** Sir, you'll be getting help, I just need you to verify your address.

**Reporting Party One:** It's 6545 Montezuma Road.

**EMD:** Apartment number what?

**Reporting Party One:** Seventeen...

**EMD:** Ok.

**Reporting Party One:** ...but I'm not going to pay for this s\_\_t if you're going to screw me around again.

**EMD:** Ok, the girl needs help, ok?

**Reporting Party One:** Well, I know she does.

**EMD:** All right, we're going to get help out there for her. Right now, I want you to encourage her to slow her breathing down.

**Reporting Party One:** Well, we're trying.

**EMD:** All right and we'll be out there in a couple of minutes.

**Reporting Party One:** Ok.

**EMD:** All right, good bye.

# Scenario One

**CALL #2 – Police Dept. Dispatcher calling EMD**  
**Re: Hyperventilating twenty-two year old female**

## SCRIPT

**EMD:** Paramedics

**P. D. Dispatcher:** Yea, P.D. here... this person hung up. Apparently this was a medical emergency. Do you want me to give you a call back?

**EMD:** No, I don't need it. It's on my ANI/ALI and we're already responding to this.

**P. D. Dispatcher:** I beg your pardon.

**EMD:** We're already responding to this, 6545 Montezuma?

**P. D. Dispatcher:** Right, a male said that he needed an ambulance.

**EMD:** Right and he hung up on you?

**P. D. Dispatcher:** Yes.

**EMD:** Well he called us a little bit ago and we're already on the way.

**P. D. Dispatcher:** Yea, something about hyperventilating.

**EMD:** Right.

**P. D. Dispatcher:** Ok.

**EMD:** Thanks.



# Scenario One

**CALL #3 – Citizen #2 calling EMD**  
**Re: Hyperventilating twenty-two year old female**

## SCRIPT

**EMD:** Paramedics

**Reporting Party:** Ah, yes I need an ambulance. I have ah ah girl here...age...what age is she? Twenty-one, she drank an excessive amount of alcohol and she's going into convulsions right now. She's thrown up as much as she possibly can and she's dry heaving. We don't know what to do.

**EMD:** What's your address?

**Reporting Party:** It's 6545 Montezuma Road, this is in the college area.

**EDM:** Ok, exactly what is she doing right now?

**Reporting Party:** Ah...

**EMD:** Ok, someone called five minutes ago and we started an ambulance five minutes go.

**Reporting Party:** ... and then he tried to cancel it and now I'm calling back. I'm here...

**EMD:** We haven't cancelled it, we're still on the way.

**Reporting Party:** Ok.

**EMD:** Now what is she doing?

**Reporting Party:** Ah...right now we got her into ah...I just came home and she was in front of the apartment complex and she was dry heaving. I guess she had thrown up as much alcohol as she had in her system.

**EMD:** So what are you talking about when you say a convulsion?

**Reporting Party:** Ah, she's on the couch right now and she's shaking uncontrollably. We have a blanket over her...and a wash cloth on her face. We gave her water...her response...she is responding to us but ah it's not...it seems to be the longer she's sitting on the couch the less is the response we're getting from her.

**EMD:** Ok, they're outside right now and all you need to do is let them in.

**Reporting Party:** Ok, thanks.

# Scenario Two

## CALL #1 – Victim calling EMD

### SCRIPT

**BACKGROUND:** This call was received at 2:00 p.m. from an area of town having a high frequency of violent crimes. The Reporting Party was the patient and the victim. The patient's speech is slow, but strong and deliberate. He sounds as though he might be splinting and is experiencing some pain. His voice does not suggest any shortness of breath or difficulty breathing.

**EMD:** Paramedics, Operator 18.

**Reporting party:** Yes ma'am, I'm in real bad shape. I just got out of Detox and I got robbed, too.

**EMD:** Ok sir, were you injured when you were robbed?

**Reporting Party:** Yes ma'am, a little bit but not that much.

**EMD:** Ok, do you want to go to the hospital?

**Reporting Party:** Yes ma'am, University Hospital.

**EMD:** Sir, are you injured?

**Reporting Party:** Yes.

**EMD:** What part of your body is injured?

**Reporting Party:** They stomped me real bad...my lungs.

**EMD:** Sir, what part of your body was injured?

**Reporting Party:** My left side.

**EDM:** Your left side?

**Reporting Party:** Yes ma'am.

**EMD:** What do you mean your left side...like your stomach?

**Reporting Party:** No ma'am, my lung.

**EMD:** Your lungs?

**Reporting Party:** Yes.

**EMD:** Were you hit in the chest?

**Reporting Party:** I don't know, hon. I dis...

**EMD:** Where did the people go that robbed you?

**Reporting Party:** I don't know that either.

**EMD:** Are they still in the area...do you see them?

**Reporting Party:** Yea, they're around here somewhere.

**EMD:** Do you see them?

**Reporting Party:** Yes, ma'am.

**EMD:** You do see them? Ok, why don't you stay on the line with the police and I'll get somebody on the way?

**Reporting Party:** Ok.

**EMD:** Medic 28 respond to Eleventh and Market for an assault victim with a chest injury. Stand back for Police Department to clear the scene, the assailants are still in the area, Police Department is responding.

**INSTRUCTOR NOTES:** This scenario should evoke several topics for discussion.

--Should they tell the responding units to **"stand back?"**

--What is the Dispatcher's responsibility to the responding units?

--What is the Dispatcher's responsibility to the patient?

--Will a delay in care cause a worsening of the patients condition?

# Scenario Two

**CALL #2 - Police Dept. Dispatcher calling EMD**  
**Re: Robbery Victim**

## SCRIPT

**BACKGROUND:** This was a second call from the same area of town and was received less than five seconds after the first call ended

**EMD:** Paramedics.

**Police Dept. Dispatcher:** This is P.D. with a transfer for medical aid.

**Reporting Party:** We need an ambulance at 5739 Montezuma Road.

**EMD:** Ok, what's the medical problem there?

**Reporting Party:** I guess somebody punched this guy and he's out on the ground and he's bleeding like crazy and that's all I know.

**EMD:** Where's he bleeding from?

**Reporting Party:** I guess from the mouth and nose.

**EMD:** Is he conscious?

**Reporting Party:** No, he's out right now and everyone is around him. We just need someone over here right now.

**EMD:** Are you inside or out on the street?

**Reporting Party:** He's out on the sidewalk.

**EMD:** So you really don't know what happened to him?

**Reporting Party:** No, we just heard all these people run out there and when we looked he was on the ground.

**EMD:** Ok, we'll have someone out there in just a few minutes...stay on the line for the Police Department.

# Scenario Two

## CALL #3 - CHP Calling EMD Re: Robbery Victim

**BACKGROUND:** This was a third call from the same area of town and was received less than five seconds after the second call ended

### SCRIPT

**EMD:** Paramedics

**CHP Dispatcher:** Hi CHP (California Highway Patrol) we have a cellular call reporting a person down on Montazuma Avenue.

**EMD:** Ok, that's the fifty seven-hundred block?

**Reporting Party:** Ah, yes...someone's passed out.

**EMD:** Ok, we're already responding to that ma'am.

**Reporting Party:** It's Campanile and Montezuma at the Campanile Apartments.

**EMD:** Yes.

**Reporting Party:** It's right in front of the Campanile Apartments, I just said I had a cellular phone and I'd call 9-1-1.

**EMD:** Ok, we're already on the way to that.

**Reporting Party:** Ok, thanks.

**INSTRUCTOR NOTES:** The above scenario was taken from an actual case history and was chosen for its learning value. This scenario is an illustration of the many different pitfalls an Emergency Medical Dispatcher (EMD) will encounter. You may use all or part of the scenario in your presentation depending on the legal points you want to cover. The following are key points to consider:

**Standard of care:** Always follow your Emergency Medical Dispatch Protocol Reference System (EMDPRS).

**Duty relationship:** Don't forget that the duty relationship begins when the EMD answers the phone.

**Duty to act:** Don't let the RP's lack of medical knowledge sway your judgment or distract you from your **duty to act**.

**Abandonment:** Don't let the involvement of alcohol/drugs or the obvious impairment of the reporting party (RP) diminish the importance of the request for medical aid.

**Consent:** The level of consciousness and condition of the twenty-two-year-old female in the above scenario is not clear. Based on the information supplied by the reporting parties the patient was an adult. Therefore, if the patient was unconscious, **implied consent** is assumed. If the patient was conscious and oriented she could have given her **actual consent** for medical treatment. In the first scenario the dispatcher never talked to the patient so it was correctly assumed that a condition of **implied consent** existed. The second scenario is an example of a clear-cut situation where **implied consent** is indicated because the patient was reported to be unconscious.

**Breach of duty:** When many calls are received for the same area, freeway, street complex, etc., the EMD must verify the exact location of each incident. The EMD must dispatch the most appropriate response level to each incident. It is not unusual to have multiple incidents or patients in close proximity that are not related. When in doubt, always dispatch to all additional request for medical aid.

# **CHAPTER SIX: CRITICAL INCIDENT STRESS MANAGEMENT**

## **OVERVIEW**

The main objective of this chapter is to give the EMD proper coping mechanisms and tools to help with everyday dispatcher stress and critical incident stress. This chapter will also provide the EMD with information on the Critical Incident Stress Management Team, the process of requesting debriefing and basic elements of participating in a debriefing.

## **INSTRUCTOR NOTES**

**List the objectives.**

### **OBJECTIVES**

- 6.1 List the three stages of stress.
- 6.2 Know the difference between cumulative stress and critical incident stress.
- 6.3 Name the four most common signs of long-term stress.
- 6.4 Name four common causes of stress in the dispatch center.
- 6.5 Identify two main objectives of CISM
- 6.6 Describe the process of requesting a debriefing from the Utah CISM team.
- 6.7 Identify three examples of critical incidents effecting EMD's.
- 6.8 Identify coping mechanisms for critical incident and cumulative stress.

## ***Chapter Six: CRITICAL INCIDENT STRESS MANAGEMENT***

### **WHAT IS STRESS?**

Stress is our body's response to a demand we put upon it. Stress is controlled by our autonomic nervous system, the same system that controls our breathing. Webster's dictionary defines stress as "the specific stimulus that disturbs or interferes with the normal psychological equilibrium of an organism". When we experience a response by the body to an excessive stress, the adrenal glands release what is known as the "fight or flight" hormone. This hormone is adrenaline. Adrenaline is released when we are anxious or fearful, and nor-adrenaline when we become angry. These hormones can raise blood pressure, increase heart rate and respirations, trigger perspiration, and cause irregular heartbeats. Our body is telling us to take action, to fight or flight. These stress hormones remain in the human body for several days, and unless properly dissolved with counter measures, will build up over time and can cause life-threatening conditions such as heart disease, high blood pressure and cancer. Another hormone released is glucocorticoid. It blocks the brain's memory path and momentarily makes us forget even simple things that we may have known for a long time.

### **GOOD STRESS AND BAD STRESS**

Stress is experienced through all five senses and we perceive it first in our minds. ***Eustress***, or good stress, is what causes us to seek warmth when we are cold, food when we are hungry, sleep when we are tired. It makes us pull our hands away from a burning candle. Our body is responding to a basic need for survival, it is automatic. Eustress is also responsible for motivation and the drive to achieve goals.

When our brains become overloaded with too many instructions that we cannot act on, we experience bad stress or ***distress***. As distress builds up it is called ***cumulative*** stress. Prolonged exposure to cumulative stress without proper management will eventually lead to "burnout". When a person reaches the "burnout" stage, they are no longer capable of effectively doing their job, either mentally or physically. Stress is an essential and unavoidable part of our lives and we can never be totally stress free. Recognizing our own personal stressors, and learning to effectively use the energy released by stress, will let us manage our stress instead of our stress managing us.

### **THREE STAGES OF STRESS**

Our body responds to stress in three stages. First is the alarm stage, when the body reacts to a stressor. Second is the resistance stage, when the stressor is gone and the body wants to repair the damage caused by the stress. The third stage is the exhaustion stage. This occurs when the stressors are prolonged and the body remains in the alarm stage with no time to repair itself. Most incidents in the dispatch center are resolved while we are in the first and second stages. Prolonged and/or highly emotional incidents, such as an airplane crash, a tornado, or a terrorist attack, will leave us in the exhaustion mode. Stress is normally turned off only through vigorous physical exercise. Since dispatchers cannot do aerobics while tethered to a console, stress relief may sometimes be hours away.



## ***Chapter Six: CRITICAL INCIDENT STRESS MANAGEMENT***

### **COMMON CAUSES OF DISPATCHER STRESS**

A common cause of dispatcher stress is shift work, which leads to irregular sleep patterns and disruption of normal family life. It takes the human body three weeks to adjust to a new schedule. If a dispatcher changes shifts every month that means the body is only "normal" for one week before we change shifts and start the cycle all over again. Another common source of stress is co-workers. The close quarters in a dispatch office, and the constant partnership required between workers, does not allow for "personal space".

The emotional aspect of some calls, with no time to recoup before answering another, is also a source of dispatcher stress. Other contributing factors in our working environment are the media's attention, ergonomics, new equipment, overload and then under load. You may experience all of these in one day and you may only have one or two.

Besides the nature of a dispatcher's job, certain personality traits that make good dispatchers also make dispatchers susceptible to excessive stress. See how many of these you recognize in yourself.

1. Need to be in Control
2. Action-Oriented
3. Risk-Taker
4. Highly Dedicated
5. Strong need for stimulation
6. Loves to be "first" in accomplishment, thrives on challenges
7. Obsessive/Compulsive

The cause of stress is different for everyone. In a fifteen-minute time frame you may be able to handle a suicidal person with a gun, a mother with a choking baby, a lady who needs to give CPR to her mother, and a man complaining about his neighbor's dog messing in his yard for the 3rd time this week. You may be able to handle this fifteen-minute time frame with little consequence while the EMD sitting next to you may not.

### **INSTRUCTOR NOTES**

**List control techniques while on the job.**

## ***Chapter Six: CRITICAL INCIDENT STRESS MANAGEMENT***

### **CONTROLLING STRESS WHILE ON THE JOB**

The quickest way to control stress while on the job is to take a break. If that is not possible, try the following:

1. Take slow, deep breaths. Inhale through your nose and exhale through your mouth.
2. Consciously relax every muscle in your body, starting with your scalp and work all the way down to your toes.
3. Stand up and stretch. Try to touch the ceiling and then the floor.
4. Let your head fall to your chest and rotate your head clockwise and then counter clockwise.
5. Talk about your reactions with your co-workers. They are probably experiencing the same feelings.

### **SIGNS AND SYMPTOMS OF LONG TERM STRESS**

As stress builds up over time, studies have shown a pattern of certain symptoms that present themselves most often. These are a persistent feeling of fatigue, loss of motivation for your job and also in your personal life, negativity, and constant cynicism. Other common symptoms of distress include backache, headache, gastrointestinal problems, and sleep disorders. Our immune system is also attacked, leaving us more susceptible to various diseases.

### **INSTRUCTOR NOTES**

**List long term coping mechanisms for handling stress**

**Emphasize the importance of exercise followed by relaxation.**

### **COPING TECHNIQUES FOR STRESS MANAGEMENT**

How do you cope with the stress in your life, whether on the job or at home? The following list has been compiled by experts in the stress management field. Incorporate them into your daily routine.

1. Don't make unreasonable demands on yourself that you can't easily adhere to. **Learn to say "No".**
2. Exercise regularly. The hormones released by exercise neutralize the hormones released by stress. This is essential for long-term health. Even something as simple as washing and waxing your car, or mowing the lawn, or playing basketball with your teenager would be beneficial.

## ***Chapter Six: CRITICAL INCIDENT STRESS MANAGEMENT***

3. Eat right. During excess stress periods avoid caffeine and alcohol.
4. Develop friends away from work.
5. The final stage is relaxation. Be aware of what relaxes you. See a funny movie, read a book, play the piano, or go for a scenic drive. Make time for yourself. Your life depends on it.

### **INSTRUCTOR NOTES**

#### **Introduce the elements and concepts of CISM**

#### **CISM**

The Utah Critical Incident Stress Management (CISM) program has been established to assist emergency service workers throughout the state. The CISM team is made up of mental health professionals and peer support personnel who are trained to assist emergency responders in dealing with the stress of their profession.

The main objective of CISM is to provide crisis intervention after, or during, critical incidents in order to minimize stress-related injuries to emergency personnel. CISM is both a psychological and educational group process designed to:

1. Lessen the impact of critical incidents on emergency workers when responding to critical incidents.
2. Accelerate the recovery process of emergency personnel who suffer from stress related injuries.

Some examples of critical incidents are: Suicide, death, or serious injury of a co-worker, high media interest in the event, prolonged events, injury or death of a child, mass casualty incidents, a natural disaster, or any event that troubles an emergency worker who participated in the event.

#### **WHAT IS A DEBRIEFING?**

Depending upon the situation, a team of two to four people from the CISM team will meet with the participants of a critical incident. At least one of the responding team members will be a mental health professional. The remaining CISM team will be experienced emergency workers, "or your peers", who can relate to those involved in the incident. The Utah CISM team will respond upon request and free of charge.

## ***Chapter Six: CRITICAL INCIDENT STRESS MANAGEMENT***

The team usually does a debriefing in a group setting, however, if a request is made for assistance when only one person is having a stress reaction, a referral may be made for one-on-one assistance.

**On-site defusing:** Highly emotional, extended responses may necessitate a request for the team to report to the incident site. The team will be instructed to report to the incident commander, where together they will determine if the CISM team will observe personnel for signs of immediate overwhelming stress symptoms and/or will intervene. A demobilization center may be established to provide immediate relief.

**Time of debriefing:** The formal debriefing is most beneficial if held within 24 to 72 hours after the incident. Debriefings will last from two to four hours depending on the size of the group.

**Confidentiality:** All debriefing information is strictly confidential. No records are kept as to specifically who attended or what was discussed. To maintain the integrity of the debriefing, it is requested that only those involved with the incident should attend.

### **HOW TO REQUEST A DEBRIEFING**

**Calling the team:** The CISM team may be activated by an official, supervisor, scene commander, or chief. Individual employees should request assistance from the team through their supervisor. To arrange a debriefing call **Clearfield Police Dispatch at (801) 779-2865**. The following information must be given;

- Name of requesting agency
- Name of contact person
- Telephone number of contact person
- Brief description of incident
- Number of people who will be at the debriefing, i.e., police, fire, EMS.

This information will be forwarded to a debriefing coordinator, who will then call the contact person for further details and arrangements.

### **WHAT TRAINING IS AVAILABLE?**

**Critical Incident Stress Education:** The Utah CISM team members are able to provide in-service training in the areas of:

- Emergency services personality
- Signs and symptoms of critical incident stress
- Methodologies to support personnel and alleviate stress
- Training for Emergency Medical Technicians

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These classes are available in a two, three, or four-hour format and require that you reserve at least two-weeks in advance.

For training call: Clearfield Police Dispatch at (801) 779-2865.

### **WHY WE DO WHAT WE DO**



Found in a journal in a waiting room at St. Agnes Hospital in Baltimore, Maryland, USA. Author Unknown:

"I awoke early, as I often did, just before sunrise to walk by the ocean's edge and greet the new day. As I moved through the misty dawn I focused on a faint, far away motion. I saw a youth bending and reaching and flailing his arms, dancing on the beach, and no doubt in celebration of the perfect day soon to begin.

As I approached, I sadly realized that the youth was not dancing to the day, but rather bending to sift through the debris left by the night's tide, stopping now and then to pick up a starfish, and then standing to heave it back into the sea. I asked the youth the purpose of the effort. "The tide has washed the starfish onto the beach and they cannot return to the sea by themselves," the youth replied. "When the sun rises they will die unless I throw them back to the sea."

As the youth explained, I surveyed the vast expanse of beach stretching in both directions beyond my sight. Starfish littered the shore in numbers beyond calculation. The hopelessness of the youth's plan became clear to me and I countered, "But there are more starfish on this beach than you can ever save before the sun is up. Surely you cannot expect to make a difference."

The youth paused briefly to consider my words, bent to pick up a starfish, and threw it as far as possible. Turning to me he simply said, "I made a difference to that one."

# **CHAPTER SEVEN:**

## **BASIC EMERGENCY MEDICAL CONCEPTS**

### **OVERVIEW**

As an EMD, you will respond to many medical/traumatic emergencies as a regular part of the job. Therefore, it is very important that you know some basic medical information that will assist you in determining the nature and needs of medical emergencies. This information will also make it easier for you to communicate with various people within the EMS system.

This chapter provides you with that basic medical knowledge. You will learn about the seven systems of the body, as well as learn what *really* kills patients. Also included in this Chapter is basic information regarding shock, bleeding, respiratory distress, and a glossary of common medical terms that you will be exposed to.

### **INSTRUCTOR NOTES**

**List the objectives.**

### **OBJECTIVES**

- 7.1 Describe the seven systems of the body.
- 7.2 Describe what really kills a patient.
- 7.3 Define shock.
- 7.4 Describe methods for dealing with bleeding patients and patients in shock.
- 7.5 Describe the levels of consciousness and how to determine them.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

### **SYSTEMS OF THE BODY**

The human body is a complex organism. To make it easier, it helps to think of it in terms of having seven major systems. Each system has a specific function and, in *most* cases, operates using an entirely different set of organs than the other systems. These systems are explained below.

#### **INSTRUCTOR NOTES**

**List the seven systems of the body.**

### **SEVEN SYSTEMS OF THE BODY**

Each system has its own job and special functions that make it different from the other systems. You will learn about the Nervous System, Circulatory System, Respiratory System, Digestive System, Musculoskeletal System, Genito-Urinary System and Skin. Each of these systems is described below.

#### **INSTRUCTOR NOTES**

**Discuss the nervous system.**

**List the three sub-systems of the nervous system.**

**Name the parts of the central nervous system.**

**Discuss the brain and spinal cord.**

**List the parts of the peripheral nervous system.**

**Briefly describe motor and sensory nerves.**

**System 1: The Nervous System.** The nervous system is the part of your body that controls all of your body functions and allows for interaction with the outside world through sensation. This system is made up of the brain, spine, spinal column and all of your nerves.

The nervous system is made up of three smaller subsystems: The Central Nervous System, the Peripheral Nervous System and the Autonomic Nervous System. Each of these systems is described below.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

- 1) The **Central Nervous System** is made up of the brain and the spinal cord.
  - a) **Brain.** The brain is the control center of the body. Nothing in the body happens without first being told to do so by the brain. It receives input from the nerves throughout your body and directs all of your body functions. The brain is also responsible for reason and thought.
  - b) **Spinal Cord.** The spinal cord acts as an electric cable throughout your body. It is responsible for carrying messages from all parts of the body to the brain. It also carries messages from the brain out to the body.
- 2) The **Peripheral Nervous System** is made up of motor and sensory nerves.
  - a) **Motor nerves** are responsible for controlling movement. They tell muscles in your body to contract ("flex") or relax, causing movement.
  - b) **Sensory Nerves.** These nerves send messages to the brain (and get messages from the brain) about the world around you. They are responsible for recognizing feelings of hot, cold, light, pain, smell, taste, motion and balance.

### **INSTRUCTOR NOTES**

**Describe the autonomic nervous system.**

- 3) The **Autonomic Nervous System** is also made up of motor nerves, like the peripheral nervous system.
  - a) It transports messages from the brain to the body using the motor nerves like the peripheral nervous system. It provides automatic and unconscious monitoring and regulation of internal body functions.
  - b) Its functions include heartbeat, the force of the heart's contractions, blood vessel diameter, bronchial diameter and pupil dilation and contraction in response to light levels.

### **INSTRUCTOR NOTES**

**Describe the circulatory system.**

**Briefly describe the heart.**

**Describe arteries, veins, capillaries, blood and its parts.**



## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

**System 2: The Circulatory System.** The circulatory system carries blood to and from all parts of the body. The blood takes nutrients and oxygen (O<sub>2</sub>) to the cells of the body and takes carbon dioxide (CO<sub>2</sub>) and other waste products from the cells for removal from the body. The circulatory system is made up of the heart, arteries, veins and capillaries.

- 1) The **heart** is a four-chamber pump. Its design is the most efficient pump known to man. It is located below and to the left of the breastbone (sternum). It pumps blood through a series of one-way valves.
- 2) **Arteries** carry oxygenated blood (blood that is carrying oxygen to cells) away from the heart to the body. Arteries have thick walls that expand and shrink as blood goes through them. They get smaller as they get farther away from the heart. Most arteries are deep within the muscles or protected by bones to keep them from being damaged. If cut, arteries bleed profusely. There will be a lot of bright red blood that comes out in "spurts."

### **INSTRUCTOR NOTES**

**Tell students that adults have 5-6 liters of blood and clotting occurs within 10 minutes.**

- 3) **Veins** carry blood toward the heart. This blood has dropped its oxygen payload off for use by the cells and carries cell waste products and carbon dioxide away from the cells to be eliminated from the body. Veins get larger as you get closer to the heart and do not expand or contract like arteries. If cut, they also can bleed a lot. However, this blood "flows" (not spurts) from the wound and is a dark red color.

Note: A normal adult has approximately 5-6 liters of blood. Simple cuts should clot within 6 to 10 minutes.

- 4) **Capillaries** are thin-walled vessels. They are found between arteries and veins throughout the body. Capillaries carry oxygenated blood from the arteries to the cells of the body and exchange it for carbon dioxide and other waste products made by the cells. The waste products and blood are then taken to the veins and carried back to the heart. If cut, they "ooze."
- 5) **Blood** is made of plasma (fluid that carries carbon dioxide, nutrients, hormones and water), red blood cells, white blood cells and platelets. Red blood cells carry oxygen to the cells and carbon dioxide away from the body (oxygen sticks to a substance known as hemoglobin). White blood cells fight disease, and platelets create clots.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

### **INSTRUCTOR NOTES**

**Describe the respiratory system.**

**Tell students why breathing is necessary for survival.**

**Tell students that blockages can occur anywhere.**

**System 3: The Respiratory System.** The respiratory system is the system responsible for breathing. It takes in the oxygen we need and rids the body of waste products, like excess water and carbon dioxide. It also helps maintain body temperature (known as "temperature regulation"). It is absolutely necessary to the survival of a person that breathing continue. If breathing stops, the person will die.

**Respiration** (breathing) is an automatic function. It is controlled by respiratory centers in the brain that are sensitive to the level of carbon dioxide in your blood. Carbon dioxide levels are constantly being monitored by carbon dioxide and oxygen sensors that are located in your carotid arteries (on the sides of your neck). When oxygen levels are too low you will breathe faster. If the carbon dioxide level gets too high, again, you will breathe faster. Airway obstructions can occur at any point in the respiratory system. It is important to note that obstructions don't just occur in the throat.

### **INSTRUCTOR NOTES**

**Define agonal respirations.**

**List and describe the parts of the respiratory system.**

**Agonal respirations** are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," "occasional" or "every once in a while."

Generally the caller will not identify cardiac arrest as the cause because the patient is "breathing". In some cases, you can identify these respirations by listening. You may be able to hear the patient's breathing in the background if the caller is near the patient.

The respiratory system is made up of the following parts:

- 1) The **pharynx** is a two-channeled organ through which air enters and exits the body. It includes the nasal (in the nose) and oral phalanx (in the mouth). Air can travel in or out through either one of these.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

- 2) The **epiglottis** is a leaf-shaped organ that hangs over the opening of the larynx. During swallowing, it covers the larynx, making food go down the esophagus instead of into the lungs.
- 3) The **larynx** is the narrowest part of the respiratory system. Also called the "voice box," it is called this because the vocal cords are found here. If anything gets past your epiglottis and comes into contact with the vocal cords, they clamp down in an effort to protect the lungs.
- 4) The **trachea** is a round air passage (tube) that is approximately four inches long, through which air passes in and out. It is held open by a series of cartilage "rings."
- 5) The **bronchi** are two passages, each passage going to a lung.
- 6) The **lungs** are where the actual exchange of oxygen and carbon dioxide takes place. Normal humans have two lungs, with the right lung divided into three lobes and the left lung divided into two lobes.
- 7) **Bronchioles** are small air tubes that are found in the body of the lungs. They are simply bronchi that are broken down into smaller branches.
- 8) The **alveoli** are small (microscopic), thin walled air sacs. The oxygen exchange takes place across the membranes between the alveoli and the capillaries.
- 9) **Diaphragm/rib muscles** are used to expand (during inhalation) or contract (during exhalation) your lungs. The diaphragm is the major muscle of breathing. "Intercostal muscles" are located between the ribs and also aid in the process of breathing.
- 10) **Pleura** are two thin membranes covering the surfaces of the lungs. They lubricate the lungs and allow expansion (during inhalation) and contraction (during exhalation).

### **INSTRUCTOR NOTES**

**Discuss the digestive system.**

**List and briefly discuss each of the parts of the digestive system.**

**System 4: The Digestive System.** This system is responsible for digesting food and liquid and eliminating waste. The process of digesting food provides the cells with the fuel they need to work. There are only a small number of foods that can be used directly without being broken down.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

The digestive system is made up of the following components:

- 1) The **mouth** chews food. As food is chewed, it is moistened with saliva and makes swallowing easier. Saliva is produced by your salivary glands at a rate of about 1.5 liters per day. Chemicals in your saliva start digestion by beginning to break down food.
- 2) The pharynx is actually the **throat**. The pharynx transports both food and air. When this is blocked, it is called an "airway obstruction."
- 3) The **esophagus** is about ten inches long. It forces food down toward the stomach by constant, rhythmic contractions that start at the top and go in waves to the bottom.
- 4) The **stomach** receives and stores food. It helps push food down toward the bowels. The stomach makes 1.5 liters of pepsin per day. Pepsin is used to break down proteins. Digestion in the stomach usually lasts one to three hours.
- 5) Your **small intestine** receives liquids made by your pancreas, liver and gall bladder. These organs further digest food. The small intestine is approximately 20 feet long and is made up of three sections: the duodenum, the jejunum and the ileum.
- 6) Your **large intestine** is approximately five feet long. Its main purpose is to absorb liquid from digested food as it passes through. It absorbs approximately 5-10% of the moisture residing in the products of digestion.
- 7) The **liver** is a very important organ. It changes sugars, fatty acids and amino acids into simpler products for the body to use. It also neutralizes the harmful products that are produced by digestion. Sugars that are to be used immediately by the body are stored there. The liver also produces products that help the platelets clot, and it also makes products that improve the body's ability to fight disease.
- 8) The **gall bladder** produces and stores bile (approximately 2-3 oz). Bile is used to digest fats.
- 9) The **pancreas** has two main functions. It regulates the level of sugar in the blood stream through the production of insulin and it also makes juices/enzymes that digest fats, starches and proteins.
- 10) The **appendix** is thought to play a part in the immune responses of children. It is about three to four inches long and has no other known purpose.
- 11) The **spleen** produces and destroys blood cells. Its most important role is in fighting infection by acting as a filter to eliminate bacteria from the bloodstream. If destroyed, part of its function can be taken over by the bones and marrow in your body.
- 12) The **rectum** is a large, hollow organ used to store feces until expelled.
- 13) The **anus** is about two inches long. It controls the escape of liquids, gases and solids produced by digestion through contraction of the sphincter muscle.

## *Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS*

### INSTRUCTOR NOTES

**Discuss the musculoskeletal system.**

**System 5: The Musculoskeletal System.** This is the system of bones, muscles and their connecting tissues. It gives support for the body and provides movement through the actions of muscles and joints. Vital organs like your lungs and heart are protected by bones, which also are responsible for making and destroying blood cells. Bones are also important for storing the minerals that the body needs.

### INSTRUCTOR NOTES

**List and describe each of the parts.**

**Muscles** are attached to bones. Muscles control movement through contracting and relaxing. They also aid in breathing (remember the diaphragm?). They control circulation of the blood (the heart is a muscle) and they aid in digestion (the stomach). The musculoskeletal system is made up of the following: the head, vertebral column, chest, upper extremities, pelvis and lower extremities. In addition, there are three types of muscles, tendons and ligaments.

- 1) The **head** is composed of four bone groups: the skull (includes the cranium and base), the face, maxillary (upper jaw) and mandible (lower jaw).
- 2) The **vertebral column** is also known as the spinal column. It has 24 separate vertebrae held together by strong ligaments: 7 in the cervical spine (base of skull and neck), 12 in the thoracic spine (upper back), 5 in the lumbar spine (lower back). In addition to the 24 vertebrae, the sacrum, located below the lumbar vertebrae and joined to the pelvis, consists of 5 fused vertebrae. The coccyx, or tailbone, is below the sacrum and consists of 3 to 5 fused vertebrae.
- 3) The **chest** is comprised of the ribs, the sternum (breastbone), the xiphoid and the vertebral column in the back.
- 4) The **upper extremities** are made up of:
  - a) the shoulder girdle, which is comprised of the clavicle (collarbone), the scapula (shoulder blade) and the shoulder joint;
  - b) the arm, which is made of the humerus (upper arm) and the radius and the ulna in the forearm, and;
  - c) the hand, which is made up of carpals, metacarpals and phalanges.
- 5) The **pelvis** is made up of the ilium, the pubic symphysis and the iliac crest.
- 6) The **lower extremities** comprises:
  - a) the upper leg, which is made up of the femur (thigh bone), knee joint and patella (kneecap);
  - b) the lower leg, which is made of the tibia and fibula; and
  - c) the foot which is made up of tarsals, metatarsals and phalanges.

## *Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS*

### INSTRUCTOR NOTES

**Describe the three types of muscles.**

**Describe the difference between tendons and ligaments.**

- 7) The three types of **muscles** are:
  - a) **voluntary muscles**, which are consciously controlled (like those used when walking);
  - b) **involuntary muscles**, which are unconsciously controlled (like those in the blood vessels, and diaphragm); and
  - c) **cardiac muscles**, which are the muscles of the heart. The contractions of the heart muscle are controlled by the autonomic nervous system and by hormones.
- 8) **Tendons and ligaments** are connective tissues. Tendons connect your muscles to your bones. Ligaments connect your bones to other bones.

### INSTRUCTOR NOTES

**List and describe the genito-urinary system and its parts.**

**System 6: The Genito-Urinary System.** This system is made up of the organs of waste elimination and reproduction.

There are four parts to the urinary system. This system is responsible for the removal of liquid waste from the body and is composed of:

- 1) The **kidneys**, which filter waste from the blood stream and make urine;
- 2) The **ureters**, which are tubes that connect the kidneys to the urinary bladder and through which urine flows to the bladder;
- 3) A **urinary bladder**, which is the reservoir for urine; and
- 4) A **urethra**, which is the tube that urine passes through on the way out of the bladder and body.

The human reproductive system differs between men and women. Each has its own parts and functions. Female and male reproductive systems are described below.

- 1) The **female reproductive system** is made up of the following parts:
  - a) the **fallopian tubes**, which carry eggs from the ovaries to the uterus;
  - b) the **ovaries**, which produce female hormones; mature, store and release eggs;
  - c) the **uterus**, where the fetus (fertilized egg) develops and where menstruation (periods) occurs; and
  - d) the **vagina**, or birth canal through which babies are born.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

- 2) The **male reproductive system** is made up of the following parts:
- a) the **prostate**, which surrounds the urethra and produces the fluid that makes up the bulk of semen;
  - b) the **testes**, which produce sperm and male hormones;
  - c) the **scrotum**, which surrounds and protects the testes; and
  - d) the **penis**, which contains the urethra and through which semen and urine pass.

### **INSTRUCTOR NOTES**

#### **Describe the skin and its parts.**

**System 7: The Skin.** The skin is the outer covering of the body and is the largest organ of the body.

The skin serves as a protective barrier against microorganisms, protects the soft tissues and organs below it from injuries, and acts as insulation against heat and cold. It even helps remove waste from the body through sweat.

The skin performs other important functions as well. It provides protection against the sun's rays through pigmentation and it helps convert some of the sun's energy into vitamin-D. Finally, receptors in the skin enable the body to sense pain, heat, cold, touch and pressure.

The skin consists of the following two major components:

- 1) The **epidermis** is the thin, outer layer of skin. It is made up of various cell types, and its thickness varies across different areas of the body (thickest in the hands and feet). The outer layer of the epidermis is constantly being shed. Its cells are non-living and require no blood for nourishment. As long as the epidermis remains intact, no microorganism can enter the body through the skin.
- 2) The **dermis** (or corium) is the inner layer of skin. It is the thickest layer of the skin.

The dermis is made up of connective tissue that contains nerves, sweat glands and blood vessels. Sensations like heat, cold, touch, etc., are felt through the nerves found here.

The body's reaction to heat and cold causes the expansion and contraction of the blood vessels found in the dermis. As a result of the expansion and/or contraction of the blood vessels in the dermis, more or less blood flows through the vessels. The end result of this expansion/contraction is the loss or conservation of body heat.

## Chapter Seven: Basic Emergency Medical Concepts

### INSTRUCTOR NOTES

Tell the students to complete Exercise #1. Answers are at the end of this section.

**Exercise 1: Systems of the Body - Match Game Instructions:** On the following page is a table consisting of questions and answers. In the left column are 12 answers. Write the number of the question that corresponds to the answer found in the left column.

Write your answers on the lines provided on the left side of the table. You have 10 minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.

	<i>Answers</i>	<i>Questions</i>
	Central, peripheral and autonomic	1. Narrowest part of the respiratory system; ("voice box")?
	Pharynx	2. Parts of the pelvis?
	Pancreas	3. Connect muscles to bones?
	Motor and sensory	4. Four major parts of the circulatory system?
	Kidneys, ureters, urinary bladder and urethra	5. Three subsystems of the nervous system?
	Ilium, pubic symphysis and iliac crest	6. Carry oxygen to the cells?
	Heart, arteries, veins and capillaries	7. Regulates level of blood sugar; produces enzymes that break down starches, fats and proteins?
	Ligaments	8. Carry oxygenated blood to the body ,away from the heart?
	Red blood cells	9. Connect bones to bones?
	Larynx	10. Two nerve types of the peripheral nervous system?
	Tendons	11. Parts of the urinary system?
	Arteries	12. Two channeled body through which air enters/exits the body?



## ***Chapter Seven: Basic Emergency Medical Concepts***

### **INSTRUCTOR NOTES**

**Describe what kills patients.**

#### **What Really Kills Patients?**

Now that you understand the basics of the seven systems of the body, you need to understand what really kills a patient. Many traumatic emergencies get worse as time passes, while medical emergencies tend to get better over time. Three problems can worsen the medical situation over time. These are: (1) severe blood loss, (2) breathing obstruction, and (3) cardiac arrest. The EMD can have the most effect on these three situations by instructing callers in some form of emergency medical intervention.

Death is caused by many things. Traumatic causes are blood loss, airway obstruction that prevent breathing, shock and brain/spinal cord damage. The most common non-traumatic cause of death is cardiac arrest.

#### **Levels of Consciousness, Shock, and Respiratory Distress**

Consciousness, shock and respiratory distress are the three major criteria used to determine dispatch categories. At this point you need to know a few things that will help you do your job.

- 1) Consciousness is very hard to determine without actually seeing the patient. You must rely on the protocols and information from callers to provide you this information. The protocols are designed to help you do this.
- 2) Not all sick people appear sick. At the same time, patients in shock or respiratory distress will look sick. When responding personnel get to the patient and they see a pale, diaphoretic ("sweaty"), weak and nauseous person, they immediately know they have a sick person on their hands.
- 3) It is up to you to be able to recognize these truly sick people based on the information you get from callers.

### **INSTRUCTOR NOTES**

**List and describe the four levels of consciousness.**

**Levels of Consciousness.** There are four levels of consciousness that you need to learn. They are taught in order of their level of severity, with alert being the highest level, and unresponsive being the lowest and most serious.

- 1) **Alert** is the highest level of consciousness. (Is the patient awake and aware of their surroundings?) If a patient is alert, then there is less cause for concern.
- 2) **Verbal** is the second highest level of consciousness. These patients respond only when you talk to or yell at them (verbal stimulus). They do not respond unless you constantly talk to them.

## Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS

- 3) **Pain** is the second lowest level of consciousness. A person in this state is only able to respond to painful stimuli. They require painful stimulation to respond.
- 4) **Unresponsive** is the lowest and most dangerous level of consciousness. Patients in this state do not respond to *any* stimulus.

### INSTRUCTOR NOTES

**Tell students how to determine consciousness.**

**Tell students that it is important to relay information as received.**

**Determining Consciousness.** How can you determine consciousness? Your EMDPRS protocols will help you determine a patient's consciousness level. Generally, you can determine consciousness by asking the caller:

- 1) Is the patient awake?
- 2) Have you tried to wake them up?
- 3) Can they talk to you?

Don't worry about using consciousness categories with the responders. For example, if the caller says that the patient is talking gibberish and can only stay awake when they yell at him, then tell that to the responding personnel. You just need to recognize the level of consciousness and dispatch accordingly.

**NOTE:** From a dispatcher's perspective, you are trying to determine whether a patient is conscious or is in an altered state of consciousness. Your priority is airway maintenance. It is not so important to determine why the patient is unconscious; all that matters is that the patient *is* unconscious. If the patient is unconscious, turn them on their side and monitor their breathing.

**QUESTION:** Can you describe the levels of consciousness? How do you determine each level of consciousness?

### INSTRUCTOR NOTES

**State that airway is most important in the unconscious patient.**

**Prepare advance descriptions that are based on real life scenarios.**

**Define shock.**

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

**Shock.** Shock is a major killer of patients. It can rapidly appear almost without symptoms. For this reason, shock is often called the "silent killer." It is defined as "inadequate tissue perfusion." This simply means that there is a lack of circulation throughout the body, but most importantly to the major organs (heart, lungs, brain, kidneys, etc.).

### **INSTRUCTOR NOTES**

**List and describe symptoms of shock.**

- 1) **Symptoms of shock** (described by patient) include the following. Not all patients show these, and sometimes **none** are present:
  - a) A feeling of "impending doom" (that something terrible is going to happen soon, that death might be imminent);
  - b) Weakness;
  - c) Nausea;
  - d) Thirst;
  - e) Dizziness;
  - f) Coolness; and
  - g) Restlessness or anxiety.

### **INSTRUCTOR NOTES**

**List and describe the signs of shock.**

- 2) **Signs of shock** (described by the caller based on their own observation) include the following:
  - a) Pale, cool and/or moist skin;
  - b) Shallow and/or rapid breathing;
  - c) Lackluster eyes and/or dilated pupils (pupils appear larger than they should);
  - d) Decreasing level of consciousness leading to unconsciousness;
  - e) Fluid loss from bleeding, vomiting or diarrhea;
  - f) Weak or "thready" pulse; and
  - g) A steady drop in blood pressure.

### **INSTRUCTOR NOTES**

**List and describe the types of shock.**

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

**Types of shock.** There are many types of shock. You may never encounter them all, but the most common are listed and described below.

- 1) **Anaphylactic shock** (also called "allergic shock") usually accompanies the ingestion or inhalation of a substance to which a patient is severely allergic. It frequently occurs with insect stings as well. Signs and symptoms include difficulty breathing, swelling of the face and or tongue, tightness in the chest, itching or burning skin, and hives covering large parts of the body.
- 2) **Cardiogenic shock** occurs when the heart is no longer able to develop enough pressure to circulate blood properly.
- 3) **Hemorrhagic shock** occurs when the body loses large amounts of blood through internal or external bleeding. It also occurs with hypovolemic shock.
- 4) **Hypovolemic shock** occurs when the body loses large amounts of body fluids through vomiting or diarrhea.
- 5) **Neurogenic shock** usually occurs with spinal cord damage. Blood vessels that are normally tightened ("constricted") begin to relax and blood pressure rapidly drops. Blood begins to pool below the level of the spinal cord injury.
- 6) **Psychogenic shock** ("fainting;" or "vasovagal reaction") occurs when blood vessels suddenly dilate (expand or relax) because of some shock to the system like extreme fear or minor injury. Blood flow to the brain is temporarily interrupted and the person "faints."
- 7) **Septic shock** is caused by severe infections. Toxic substances from the infection cause blood vessels to dilate and plasma to be lost through vessel walls.

### **INSTRUCTOR NOTES**

**Tell the students the types of shock they will mostly deal with.**

**Tell the students how to deal with shock.**

**NOTE:** The most common types of shock you will encounter are anaphylactic, cardiogenic, hemorrhagic, hypovolemic, and septic.

**Dealing With Shock.** Shock will kill the patient if not treated rapidly. There are a number of things you can tell callers to do to alleviate the danger of shock until help arrives. These are listed and described below.

- 1) Do not give the patient anything to eat or drink.
- 2) Make sure the patient's airway is clear so they can breathe.
- 3) Control bleeding (if external) by the use of direct pressure.
- 4) Calm and reassure the patient.
- 5) Lay patient on side (preferably left-side) or allow them to remain in a position that is most comfortable, unless they are trauma patients.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

- 6) DO NOT MOVE TRAUMA PATIENTS!!!!
- 7) Keep the patient warm and prevent the loss of body heat by covering the patient with something.

**QUESTION:** What is shock? What are its signs and symptoms? Can you name five types of shock? How would you tell a caller to deal with shock?

### **INSTRUCTOR NOTES**

#### **Review respiratory distress and breathing difficulty.**

**Respiratory Distress vs. Breathing Difficulty.** Callers will often say that a person is "having a hard time breathing." It is up to you to determine if the caller is describing respiratory distress or breathing difficulty.

It is difficult to tell if a patient is suffering from respiratory distress or has a breathing problem without understanding the difference. Each can occur from a variety of sources, including benign (not dangerous) sources like allergies or colds. Because of the difficulty in distinguishing true respiratory distress from breathing difficulty, these calls can be among the most challenging you will face.

### **BREATHING DIFFICULTY SCENARIOS**

- 1) The breathing problem is present with other symptoms or chief complaint types (more on these in Module 3).
- 2) The patient appears sick, but it may be due to the chief complaint and not the breathing difficulty.
- 3) Most people have breathing difficulty when vomiting. However, this does not constitute "distress."

### **TRUE RESPIRATORY DISTRESS**

- 1) Patients in true respiratory distress are *very* sick people. These patients *look, act* and *sound* sick, usually being able to speak only short phrases (or one to two word sentences) if they have to speak. Their breathing may be described by callers as very "noisy" (*or very quiet*).
- 2) Patients in true respiratory distress are putting all of their efforts and energy into trying to breathe or getting where they think there might be more air. They look as if they were (and still are) working hard.
- 3) Patients in respiratory distress appear sweaty (diaphoretic), pale and sometimes blue (cyanotic). In cases of true respiratory distress, the patient is rapidly running out of oxygen, losing the ability to continue breathing often due to fatigue or airway obstruction.
- 4) Choking is also a form of respiratory distress. Persons with obstructed airways will demonstrate classic choking symptoms. The caller will immediately recognize these as such, unless the caller was not present when the victim choked and found the victim in a collapsed state.

## ***Chapter Seven: Basic Emergency Medical Concepts***

### **INSTRUCTOR NOTES**

**Describe the signs and symptoms of true respiratory distress.**

**Signs and Symptoms of Respiratory Distress** may include any of the following. Signs and symptoms can occur in any combination. Some symptoms are:

- 1) Classic choking symptoms (clutching or grasping at the throat);
- 2) Anxiety or restlessness (as the body reacts to a lack of oxygen to the brain);
- 3) Cyanosis (patient turning blue);
- 4) Rapid breathing (tachypnea);
- 5) Noisy respiration;
- 6) Labored appearance (patient appears to be working hard); and
- 7) The patient may be sweaty (diaphoretic).

**QUESTION:** Can you describe respiratory distress? What are the major signs and symptoms of true respiratory distress? How is it different from breathing difficulty?

### **INSTRUCTOR NOTES**

**Describe how to control bleeding.**

**Bleeding.** Bleeding has a set of unique problems and may elicit strong emotional responses. Severe bleeding must be treated immediately.

The body attempts to stop bleeding using the process we call "clotting." Blood platelets break down and block the hole through which the blood is escaping. When the bleeding is severe (as with a cut artery), the clotting can't happen fast enough or completely enough to fill the hole, resulting in shock and then death.

**Control of Bleeding.** Almost all bleeding can be stopped through the use of *direct pressure*. The caller (or a bystander) is told to use a universal bandage or clean gauze pad and press down directly on the open wound. In most situations, callers won't have these. Tell them to use the cleanest cloth available.

Tell callers not to remove soaked bandages (or the "dressing") because this will rip open the clot that is forming in the wound. If they feel they need to replace the bandage because it is soaked, simply place another on top and continue pressure. If the bleeding has stopped, they can tie the dressing in place with a bandage.

**NOTE: *This is very important.*** When telling callers to use direct pressure, tell them to *put a lot of pressure on the wound*. Using lots of pressure will stop even arterial bleeds.

Elevate bleeding extremities. This method is good for extremities because it gets the bleeding limb up higher than the heart, thereby slowing the flow of blood through the force of gravity.

## ***Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS***

**NOTE:** In cases of internal bleeding, you just need to recognize it because of shock issues. There's not a lot you can do about it!!!

### **INSTRUCTOR NOTES**

**Emphasize not to remove a tourniquet.**

**A Word About Tourniquets.** Tourniquets can cause a lot of damage by stopping the flow of blood completely through a limb. This causes nerve and cell damage that is frequently permanent and can even result in amputation. IF A CALLER SAYS THAT A TOURNIQUET HAS ALREADY BEEN APPLIED, LEAVE IT ON! NEVER INSTRUCT CALLERS TO APPLY OR TO REMOVE A TOURNIQUET.

## Chapter Seven: BASIC EMERGENCY MEDICAL CONCEPTS

### INSTRUCTOR NOTES

Tell students to complete Exercise #2. Answers are found at the end of this section.

#### Exercise 2: Bleeding, Shock and Respiratory Distress - Match Game

**Instructions:** On the following page is a table consisting of questions and answers. In the left column are 10 answers. Write the number of the question that corresponds to the answer found in the left column.

Write your answers on the lines provided on the left side of the table. You have 10 minutes to complete this exercise. Upon completion of this exercise, the instructor will review the answers with you. Be sure to ask any questions you may have at this time.

	<i>Answers</i>	<i>Questions</i>
	Symptoms	1. Characteristics described by callers about patients?
	"Impending doom," weakness, nausea, coolness	2. <b>Signs</b> of shock?
	Shock	3. Types of shock?
	Signs	4. Signs of respiratory distress?
	Alert, Verbal, Pain, and Unresponsive	5. Characteristics described by patients about themselves?
	Hypovolemic, hemorrhagic, and anaphylactic	6. Process by which platelets break down and block holes where blood is escaping?
	Anxiety, cyanosis, rapid breathing, labored appearance, sweaty, noisy respirations	7. Inadequate tissue perfusion the "silent killer?"
	Neurogenic shock	8. Relaxation of blood vessels, allowing blood to pool below the level of the injury?
	Moist skin, shallow breathing, dilated pupils, Decreasing consciousness	9. <b>Symptoms</b> of shock?
	Clotting	10. Four levels of consciousness



## Chapter Seven: Basic Emergency Medical Concepts

### INSTRUCTOR NOTES

Have students review these common medical terms and answer any questions.

### COMMON MEDICAL TERMS

As an EMD you will hear many medical terms. It is important that you become familiar with these terms so you can interpret them for your own use, or as needed to callers. Over time you will become more familiar with them because you will hear them frequently.

- 1) **Abdominal aortic aneurysm.** A dilated section of the lower aorta in the abdomen. This can rupture causing severe pain, internal bleeding and even death.
- 2) **Abrasion.** A type of injury. When the skin is scraped away.
- 3) **Acute.** Sharp, severe or having rapid onset; usually short in duration and not chronic
- 4) **Anaphylactic shock.** A state of collapse due to injection of or exposure to (including ingestion, breathing and skin contact) a substance to which the patient is allergic.
- 5) **Angina** (*also angina pectoris*) A steady, dull, squeezing pressure; choking or suffocating pain in the chest. Can radiate out toward the neck, arms or shoulder. Is due to the lack of adequate oxygen delivery to the heart muscle (through blockage of coronary arteries).
- 6) **Anoxia** A lack of oxygen
- 7) **Appendicitis.** An inflammation of the appendix resulting in severe pain, fever and nausea.
- 8) **Arterial hemorrhage** Bleeding from an artery; a cut or punctured artery will usually emit bright red blood in spurts or waves (though it can be a steady flow if the artery is deeply buried).
- 9) **Asthma** A disease characterized by spasms of bronchial tubes, resulting in shortness of breath and "wheezing"; can be fatal if not quickly treated.
- 10) **Benign.** Not dangerous; not recurrent or progressive.
- 11) **Blood pressure.** The pressure exerted by the blood against the walls of the arteries as it travels through the body.
- 12) **Cardiac arrest** (*aka "Sudden Death"*). Sudden cessation of heart functions; usually confused with myocardial infarction (MI).
- 13) **Carbon monoxide** (*CO*) A poisonous gas found mainly in exhaust fumes of gasoline and diesel powered engines.
- 14) **Cardiopulmonary Resuscitation (CPR).** The act of attempting to restore consciousness via manual heart massage and lung inflation.

## ***Chapter Seven: Basic Emergency Medical Concepts***

- 15) **Contusion.** (*aka "bruise"*) An injury in which the skin is not broken; usually due to sudden impact with a hard object.
- 16) **Cranial.** Pertaining to the skull
- 17) **Croup.** A disease characterized by difficulty breathing and feelings of suffocation accompanied by an intense, barking cough and swelling of the larynx and/or upper trachea.
- 18) **Crowning.** A stage of childbirth in which the baby's head is visible.
- 19) **Cyanosis.** (*also cyanotic*) Discoloration of the skin (usually a gray, blue or purple tint) due to a lack of oxygen in the blood.
- 20) **Diaphoresis.** Profuse sweating. One of the symptoms of shock or respiratory distress but can occur for any reason.
- 21) **Ectopic pregnancy.** (*aka "tubal pregnancy"*) A potentially life-threatening circumstance when a fetus implants itself in a fallopian tube rather than inside the uterus. After growing for approximately six weeks, the fetus may rupture through the wall of the tube, causing hemorrhage, severe pain and life-threatening internal bleeding.
- 22) **Hemoglobin.** Iron-containing pigment of the red blood cells.
- 23) **Hematoma.** Swelling caused by blood outside of the blood vessels.
- 24) **Hemorrhage.** Abnormal internal or external discharge of blood.
- 25) **Hiatal hernia.** Partial slippage of the upper stomach above the diaphragm; protrusion of the stomach through the diaphragm.
- 26) **Hives.** Eruptions of very itchy spots on the skin; usually associated with allergies.
- 27) **Hyperventilation.** An increase in the breathing rate; usually accompanied by great anxiety; does not usually exist in isolation. It is usually symptomatic of a more serious, underlying problem.
- 28) **Hyphema.** Blood in the anterior chamber of the eye in front of the iris.
- 29) **Hypothermia.** Drastic lowering of body temperature usually caused by prolonged exposure to extreme cold.
- 30) **Hypovolemia.** Diminished blood volume.
- 31) **Laceration.** A tear or cut in the flesh.
- 32) **Meningitis.** Inflammation of the spinal cord or brain causing intense headaches, intolerance to light or sound and possibly delirium, convulsions and/or coma.
- 33) **Migraine.** Severe headache, frequently resulting in disordered or distorted vision, nausea and vomiting.
- 34) **Myocardial Infarction ("M.I." or "Heart Attack").** Death of an area of the heart muscle due to obstructions in blood flow or sometimes confused with cardiac arrest.

## ***Chapter Seven: Basic Emergency Medical Concepts***

- 35) **Ocular trauma.** Injury to the eye
- 36) **Orbital fracture.** A break in the portion of the skull that encases the eyeball.
- 37) **Paralysis.** Loss or impairment of motor function.
- 38) **Pericarditis.** Inflammation of the sac that encloses the heart..
- 39) **Perineum.** Part of the female genital area.
- 40) **Pulse.** The pressure wave exerted against the arteries upon the contraction of the heart. It can be felt by placing fingertips on an artery where it passes close to the skin.
- 41) **Signs.** Something a rescuer can see, hear, feel and occasionally taste concerning a patient. Not the same as symptom.
- 42) **Stroke.** Sudden interruption of blood flow to an area of the brain (due to obstruction, bleeding, clot, etc.) causing loss of strength, feeling, speech or even decrease in consciousness.
- 43) **Symptom.** Something a patient expresses about themselves; examples are "My chest hurts; I'm cold; I have a sharp pain in my head," etc.
- 44) **Tachypnea.** Rapid breathing. One symptom of respiratory distress.
- 45) **Thoracic aortic aneurysm.** Dilation of a main blood vessel in the chest cavity.
- 46) **Tourniquet.** A bandage wrapped tightly around an extremity used to slow or stop bleeding or blood loss.
- 47) **Toxic.** Poisonous.
- 48) **Trauma.** An injury (physical, emotional or psychological) inflicted by some violent event or other external force.
- 49) **Triage.** A system used for sorting patients to determine the order in which they will receive medical attention.
- 50) **Venous.** Of or pertaining to the veins.

# **CHAPTER EIGHT: DESIGN AND STRUCTURE OF EMDPRS**

## **OVERVIEW**

An Emergency Medical Dispatch Protocol Reference System (EMDPRS) helps you to understand the basic concepts behind the development and arrangement of information in the EMDPRS. You will learn that all EMDPRSs contain basically the same types of information, and in relatively the same order. By learning the types of information found in an EMDPRS, you will be able to quickly understand and use *any* EMDPRS.

## **INSTRUCTOR NOTES**

**List the objectives.**

## **OBJECTIVES**

- 8.1 Identify the three types of protocols within an EMDPRS.
- 8.2 Describe the differences in content between the three types of protocols within an EMDPRS.
- 8.3 List and describe the major sections of protocols within an EMDPRS.
- 8.4 Describe the types of information gathered or provided for each section for each of the three types of protocols within an EMDPRS.

## ***Chapter Eight: DESIGN AND STRUCTURE OF EMDPRS***

**Tell students that each agency has its own set of locally approved protocols.**

**Handout EMDPRS cards at the start of this lesson.**

### **EMDPRS STRUCTURE AND LAYOUT**

The Emergency Medical Dispatch Protocol Reference System (EMDPRS) is frequently referred to as guide cards, protocol cards, scripts or medical cards.

Every agency has its own set of local medically approved protocols. Their structure and content varies from agency to agency, but overall they tend to contain similar information. It is up to you to practice regularly with the EMDPRS used by your agency.

**NOTE:** This Chapter illustrates the types of information found on most EMDPRS cards. *The EMDPRS sample pages you will receive while training on this Chapter are generic, and are not approved for use once you return to your agency*

EMDPRS protocols are designed to present medical information in a logical and structured sequence. The order in which the information is shown on protocols will vary, based on the information that your local medical advisory personnel determines to be most important.

### **INSTRUCTOR NOTES**

**Describe the initial survey/case entry card.**

**Describe the individual “chief complaint” protocol.**

### **DESCRIPTIONS OF THREE TYPES OF PROTOCOL.**

Generally, all EMDPRS contain, at a minimum, three protocol types. Each of these protocols is designed to meet a specific need. These needs are described on the following pages. The protocol types are as follows:

#### **1. The Initial Survey/Case Entry Card.**

This protocol is used to conduct the initial questioning of all callers, in an effort to gather criteria that will help you to focus your information gathering activities.

The initial survey/case entry card protocol lists the questions to be asked of *every* caller. Questions are used to gather *location* (including telephone number) and *patient status information* (Four Commandments; chief complaint, patient age, status of breathing and level of consciousness). The information you get from the caller forms the basis for dispatch, information dissemination and further inquiry (as indicated by the EMDPRS).

## ***Chapter Eight: DESIGN AND STRUCTURE OF EMDPRS***

### **2. The Individual "Chief Complaint" Protocol.**

The individual "chief complaint" protocol is used to get information from all callers regarding the type and severity of the medical emergency being reported.

The individual "chief complaint" protocol is used by EMDs to verify and get more information on the chief medical complaints being reported by callers.

**NOTE:** Experience indicates that the information found in the 32 chief complaint types discussed during this training represent the majority of emergency medical conditions that are likely to be reported by callers. Remember, many programs will have different groupings of these 32 chief complaint types.

### **INSTRUCTOR NOTES**

**Tell students that it is generally accepted that there are 32 basic chief complaint types.**

**List and describe the four major design components of the chief complaint protocols.**

**Information found in each of the thirty-two chief complaint protocols.** Each of the thirty-two protocols contains four major design components:

- a) ***Key Questions.*** The purpose of this section is to gather additional, specific information not received or asked for by the initial survey protocol.

The "Key Questions" section lists important questions that you need to ask in order to gather additional medical information about the patient's condition.

This section is also used to help guide callers into giving you better, clearer information. Caller responses to these questions give you the information you need to determine the appropriate telephone medical instructions to give callers when (and if) required.

- b) ***Dispatch Priorities*** ("Medical Dispatch Criteria"). The "Dispatch Priorities" section identifies the proper types of response allocations that are appropriate to the situation. Responses are prescribed and approved by the local medical director.

<p><b>NOTE:</b> You should be able to dispatch the proper medical response to the scene based on the information gathered in the "Key Questions" section.</p>
---

- c) ***Post/Dispatch/Pre-Arrival Instructions.*** The purpose of this section is to list the basic information that you should give callers. It does not include medical instructions. It also helps you prepare callers for the arrival of the medical personnel you dispatched.

## ***Chapter Eight: DESIGN AND STRUCTURE OF EMDPRS***

### **INSTRUCTOR NOTES**

**Tell the students that the additional information is designed for the EMDs benefit and not intended to be shared with the callers.**

**NOTE:** The information in the "Additional Information" section is designed specifically to expand your knowledge, relative to the chief complaint types being reported by the caller. It is not intended to be shared with callers.

- d) *Additional Information.* This section gives you additional information about the medical situation, including insights and possible complications.

An example of the individual "Chief Complaint" Protocol is the ABDOMINAL PAIN/INJURY card.

### **INSTRUCTOR NOTES**

**Describe the sequence instructions/scripted medical pre-arrival instructions.**

**Use these examples.**

#### **3. The "Sequence Instructions/Scripted Medical Protocol "Pre-arrival Instructions."**

The "scripted medical protocol" is a special type of protocol instructions. These protocols give scripted telephone medical instructions (i.e., protocols) that you give to callers when life threatening immediate care needs to be given to victims in order to save their lives. These must be read aloud to the caller, word-for-word. The instructions that you give callers help them apply life-saving treatments to the victim prior to the arrival of dispatched responders.

Examples of the scripted medical protocol are **CPR, CHOKING, CHILDBIRTH, and AIRWAY MANAGEMENT** cards. These protocols contain the scripts you would use to provide telephone medical instructions to callers in this situation.

The scripted medical protocol may include additional information that can help you motivate and encourage callers to follow the instructions, to describe precautions callers should take, and describe signs that callers can look for while administering telephone directed pre-arrival scripted instructions provided by the EMD.

***Remember, the cards you use at your job or agency must be approved by the medical director of your EMD program.***

**Philosophy of Use.** When determining what an EMDPRS should look like, or how it should be used, medical advisors consider the following questions. Should my EMDPRS be a strict protocol or a dispatch guideline? Should we mandate its use or make it optional?

## ***Chapter Eight: DESIGN AND STRUCTURE OF EMDPRS***

In your area, use of the EMDPRS may vary from someone who works in another agency or city. It is up to you to be aware of the policies your agency has set for using the locally approved EMDPRS.

**Design Philosophy.** You were presented information on the design of EMDPRSs and were also given the opportunity to study the structure of your local EMDPRS. The major elements presented were:

1. Initial Survey/All-Caller Interrogation
2. Individual Chief Complaint Protocol
  - a. "Key Questions" sections of a protocol and the information found there;
  - b. The "Dispatch Priorities" section of a protocol and the information found there;
  - c. "Protocol" section that is found only on "Scripted Medical" protocols, and the information found there; and
  - d. "Additional Useful Information" section and the information found there
3. Scripted Medical Protocol

### **INSTRUCTOR NOTES**

**Review the specific design characteristics of the EMDPRS.**

**Tell trainees that EMDPRS determines the order in which actions are taken, when to dispatch, mode and configurations of responses, and when EMDs are to give medical instructions to callers.**

### **SPECIFIC DESIGN CHARACTERISTICS OF THE EMDPRS**

The EMDPRS is designed to maximize EMDPRS use and flow. The EMDPRS determines:

1. **Order** of various actions taken by the EMD;
2. When the EMD is to dispatch resources;
3. **Mode** (Hot vs. Cold) and **configuration** (type of Unit(s) of response; and
4. When the EMD is to provide instructions.

**Philosophy of Use.** When determining what an EMDPRS should look like, or how it should be used, medical advisors consider the following questions. Should my EMDPRS be a strict protocol or a dispatch guideline? Should we mandate its use or make it optional?



## ***Chapter Eight: DESIGN AND STRUCTURE OF EMDPRS***

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  - b. the "Dispatch Priorities" section of a protocol and the information found there;
  - c. "Protocol" section that is found only on "Scripted Medical" protocols, and the information found there; and
  - d. "Additional Useful Information" section and the information found there
3. Scripted Medical Protocol

# **CHAPTER NINE: CHIEF COMPLAINT TYPES**

## **OVERVIEW**

Your position as an EMD requires familiarity with a large number of medical complaints. Experience indicates, however, that there are generally 32 complaints that occur most frequently.

This chapter provides you with general medical information about the thirty-two chief complaint types. You will review the information provided in this trainee guide *and* the information found in your locally approved EMDPRS.

## **INSTRUCTOR NOTES**

**State the objectives.**

### **OBJECTIVES**

- 9.1 Identify the 32 chief complaint types.
- 9.2 Define and discuss the difference between an individual chief complaint, a traumatic chief complaint, and a time/life-critical chief complaint.
- 9.3 Discuss the difference between signs and symptoms.
- 9.4 Describe how to identify "chief complaints."
- 9.5 Discuss the purpose and focus of the questions for each category of chief complaint type (individual vs. traumatic vs. time/life-critical events).
- 9.6 Demonstrate, using the EMDPRS, answering a call with a specific complaint type.
- 9.7 Identify critical elements in cardiac arrest survival.
- 9.8 Describe the role of the EMD in providing telephone CPR.

## ***Chapter Nine: CHIEF COMPLAINT TYPES***

### **INSTRUCTOR NOTES**

**Review the EMD process.**

- 1. Starts with Initial Survey.**
- 2. After location and call-back is checked; get consciousness and breathing status.**
- 3. If patient is unconscious or not breathing, go to CPR card.**

### **CHIEF COMPLAINTS TYPES**

#### **A Quick Review of Important Concepts**

**Overview of the Process.** As you have already learned, every caller undergoes some sort of initial questioning to identify if the patient is conscious and/or breathing. In some systems, this is called the *"Initial Survey,"* the *"All-Caller Interrogation"* or *"Entry Case Level Interrogation."*

Normally, the process begins with the initial survey. This initial survey and the answers you receive from the caller direct you to the proper individual chief complaint card, which is followed by specific key questions as directed by the card. Once you get this information, you can make a decision on unit response configuration and mode, and dispatch units to the scene. You can now return to the caller and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

After the location and call-back number have been determined, you continue the initial assessment and get the *patient's age, state of consciousness* and *status of breathing*. If the patient is conscious or unconscious and breathing, the dispatcher immediately knows that the patient is alive and now has a little more time to get specific information from the caller about the patient's condition. This enables you to send resources in the proper response configuration and mode. This also allows you to give the caller accurate and useful pre-arrival (post-dispatch) instructions.

If the patient is unconscious and not breathing, or if the patient is unconscious and the caller can't tell if the patient is breathing or not, you should assume a possible cardiac arrest situation exists and turn immediately to the appropriate protocol for the provision of CPR.

The CPR protocol has clear and understandable instructions that take the caller through airway interventions prior to the provision of chest compressions. If the patient has choked and is not in cardiac arrest, you need to provide the instructions for choking intervention rather than CPR. The design of the protocol guides you through this process.

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### INSTRUCTOR NOTES

**Review the caller's emotional status paragraph. Tell students that emotional state is not indicative of the problem.**

### Review signs and symptoms

The most common high-priority symptoms included in the majority of EMDPRS are *chest pain, breathing problems, altered levels of consciousness* and, in some cases, *severe hemorrhage*. In most cases, when these symptoms are reported, you will initiate a high level ALS response due to the potential severity of the situation.

**Signs and Symptoms.** There is a difference between *signs* and *symptoms*. **Signs** are things that are found upon examining the patient. Examples of signs include thready pulse, spurting blood, cyanosis (turning blue) and diaphoresis (sweating). **Symptoms** are things that the patient complains of that s/he is feeling. Examples of symptoms include "*I'm hot/cold,*" "*I'm having a hard time breathing,*" and "*I can't feel my toes.*"

### INSTRUCTOR NOTES

**Review the chief complaint identification.**

### Review call processing flow.

**Identifying the Chief Complaint.** This is part of the "initial survey." It is important to remember that the chief complaint is that which is most paramount on the patient's (or caller's) mind.

Patients with multiple complaints will most frequently identify the chief complaint first and then go on to list the secondary complaints, many of which will be symptoms of the chief complaint. Asking "What's wrong?" often confuses the caller and causes them to assume you are asking for a diagnosis. Ask questions that elicit short and descriptive responses from the caller. They are your eyes at the scene, so ask them "What do you see?" or "Tell me what is happening."

When a caller presents you with multiple chief complaints that seem to have no relationship with each other, you need to select the one that has the most potential to worsen or that has the highest priority symptoms.

**The Flow of Call-Processing.** Your call-processing should follow a smooth pattern and logical flow. Normally the process begins with initial entry-level questioning, followed by specific key questions. Once this information is obtained, the EMD can make a decision on unit response configuration and mode and dispatch units to the scene. The EMD can now return to the telephone and begin the pre-arrival (post-dispatch) instructions required for the situation at hand.

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Prior to terminating the phone call with the caller, the EMD should ensure that the patient has a clear airway and is breathing. You should also instruct the caller to turn patients gently on their side if they should vomit (unless spinal injury is suspected). In minor or less urgent cases, you need to tell the caller to call back if the patient's condition changes before help arrives.

### **INSTRUCTOR NOTES**

**Introduce the two major medical complaint types.**

**Introduce the “individual chief complaint types.”**

**Explain the difference between acute or chronic, as needed.**

### **MEDICAL COMPLAINT TYPES: INDIVIDUAL CHIEF COMPLAINTS, TRAUMATIC INCIDENTS AND TIME/LIFE-CRITICAL EVENTS**

Generally speaking, there are two medical complaint types: *Individual Chief Complaints* and *Traumatic Incident Types*. In most cases, the calls you receive fall into these two categories. However, there is a subset of these calls that are also very important for you to know and understand. This subset is called the *Time (or Life) Critical Events*.

**Individual Chief Complaints.** It is common to assume that all reported problems are individual chief complaints. Generally this is true, however, in the field of emergency medical dispatch, there is a distinction between individual chief complaints and traumatic incidents.

Individual chief complaints typically are general medical problems. A medical problem is loosely defined as "an illness, either acute or chronic." Proper response and pre-arrival instructions in these cases is based on your ability to gather information regarding:

1. Patient's chief complaint;
2. Patient's age;
3. Patient's *priority* symptoms (if present) such as severe bleeding, decreased levels of consciousness, respiratory difficulty, or chest pain; and
4. Patient medical history that is relevant to the situation at hand.

The focus of your questioning is on the existence, or lack of priority symptoms most often associated with that particular chief complaint type. In addition, the patient's medical history and age are factors in determining the potential severity of the problem.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to keeping the patient's airway clear, keeping the patient comfortable, gathering patient medications, and advising the caller to call back if the patient's condition changes before help arrives.

## ***Chapter Nine: CHIEF COMPLAINT TYPES***

### **INSTRUCTOR NOTES**

#### **Review “traumatic incident types.”**

**Traumatic Incident Types.** Trauma is defined as "some physical injury caused by accident or violence." Proper response and post-dispatch instructions in these cases rely on your ability to gather information regarding the nature of the incident type ("mechanism of injury"), where the injuries are (core of the body or extremities), and the identification of priority type symptoms.

Trauma denotes a situation in which a patient has sustained some injury either by accident or violence. The chief complaint is usually reported in the form of a verb (he got hit, shot, cut,) or by a description of the mechanism of injury (an auto pedestrian accident, he fell off the roof, etc.).

Traumatic incident types should be assessed differently by EMDs than individual chief complaint types, because the factors used to determine response levels are different. Studies have shown that the following are the primary determining factors in response when dealing with traumatic incidents:

1. Mechanism of injury;
2. Location of injury (central or peripheral, torso, or arms and legs); and
3. Significant priority symptoms (altered levels of consciousness, usually indicative of the onset of shock, a head injury, or an underlying medical problem; severe hemorrhage or breathing problems associated with injuries to the central core).

### **INSTRUCTOR NOTES**

#### **Review specific pediatric considerations that relate to traumatic incident types.**

#### **Ask trainees to identify other pediatric considerations they may know about.**

Pre-arrival (post-dispatch) instructions vary widely, based on the situation and complaint type reported. They include the same instructions in many cases as the individual chief complaint, especially as they relate to airway control. However, traumatic incident protocols include more specific injury-related instructions. These directions are designed to protect the patient from receiving further injury from a well-meaning, but untrained, bystander who attempts to help.

Pre-arrival (post-dispatch) instructions in these cases relate primarily to ensuring the safety of the scene (patients, bystanders and responders). Instructions are provided for the control of external bleeding, ensuring the patient's airway is clear, advising the caller when it may be best to do nothing, advising the caller to guide the unit(s) to the patient and advising the caller to call back if the patient's condition worsens.

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**Specific Pediatric Considerations (Traumatic Incident Types).** Accidents are the most common cause of death in childhood, killing more children than cancer, meningitis, congenital defects, and heart disease combined. Over **3,000** deaths per year occur in infants (under the age of one) from falls, burns, drowning, choking and suffocation. For every accidental death, 100 children are seriously injured.

Traumatic incident types are by far the most common chief complaint grouping used to report incidents involving children. With regard to CPR and choking intervention, children should be defined clearly as an *infant* (0-1 year old); *child* (1-8 years old); or *adult* (over 8 years old) according to the American Heart Association and the American Red Cross. These associations should be considered when your agency is developing continuing education or conducting initial training.

### **INSTRUCTOR NOTES**

#### **Tell trainees when to suspect pediatric spinal cord injuries.**

In cases of traumatic injury, the child should not be moved unless in danger. A common error made at the scene of an injury is for the caller to move or pick up the child, run into the house or shelter, and hold the child to comfort him/her. This can prove to be devastating to the child with spinal injuries, which can be worsened when the child is being moved by concerned, but untrained bystanders. If the child has gotten up and run into the house, she/he should lie down on a flat surface and be comforted while being kept still and reassured by bystanders.

A spinal cord injury should be suspected if there is any indication of:

1. Severe facial or head injuries;
2. Unconsciousness reported as associated with the incident;
3. Numbness, tingling, or loss of sensation in any extremity(ies);
4. Paralysis or inability to move any extremities;
5. Pain in back upon movement or attempt to move; or
6. Any motor dysfunction reported by the caller.

Children may have critical injuries, but the symptoms may remain hidden until the child reaches a point of rapid deterioration. Critical symptoms such as low blood pressure do not appear as rapidly in children as they do in adults. Other symptoms like breathing and pulse may be difficult to interpret in a child who is hurt or frightened. If priority symptoms are present, time is critical and the child must be taken immediately for care.

## ***Chapter Nine: CHIEF COMPLAINT TYPES***

### **INSTRUCTOR NOTES**

**Tell trainees that children require extra attention.**

**Tell trainees that EMDs should not use emotional status as a barometer of the problem's severity.**

Conscious, injured children require extra attention, support and reassurance, preferably from an individual, consistent bystander. This must be communicated through the EMD to the bystander.

Remember, *the emotional condition of the patient and/or caller should not be used as an indicator of the severity of the problem.* Lacking experience and knowledge, children may not understand the severity of an incident and may appear to be very calm in the face of crisis. Likewise, bystanders and adults may be distraught from witnessing the incident, reacting to the sight of blood, or arms and legs bent at unnatural angles.

Prevention is the most powerful treatment for most childhood injuries. The EMD can play a role in injury prevention by recognizing and reporting traffic, playground or other hazards as they are identified in calls relating to childhood injuries.

### **INSTRUCTOR NOTES**

**Review the time/life-critical complaint types protocol.**

**Tell trainees these complaints represent the greatest danger to the patient and bystanders.**

**Tell trainees that it is vitally important to assure appropriate response to this complaint type.**

**Tell trainees that proper call handling relies on the ability to get information about the chief complaint, including any scene safety issues.**

**Time/Life-Critical Chief Complaint Types.** These are a subset of individual chief complaints and traumatic incident types. They pose the greatest danger to the patient, bystanders and/or responders.

Care should be taken with these cases to ensure that appropriate pre-arrival (post-dispatch) instructions are given, and that information regarding the safety of the scene is relayed to the responding units. Calls of this type may be specifically medical in nature like cardiac arrest, choking, childbirth, unconsciousness, CO poisoning, or HAZMAT.

Other calls received may have traumatic and individual chief complaint components included in the problem. Examples include a drowning victim with respiratory difficulty and neck pain from a shallow water diving incident; an electrocution victim with possible internal burn, who has fallen off the telephone pole and who also may have traumatic injuries from a long fall.



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Proper call handling relies on your ability to gather information about the chief complaint. It also requires that you gather information about the safety of the scene and other important factors that may require you to dispatch ancillary agencies (like police, fire and/or HAZMAT units).

Pre-arrival or post-dispatch instructions relate primarily to the scripted CPR, choking and childbirth instructions along with situational instructions for specific medical or traumatic incident types with a focus on scene safety.

### **INSTRUCTOR NOTES**

**Review EMDPRS design/use philosophy.**

**Tell trainees that EMDPRS are ordered differently, based on the direction of local medical authority. In most cases, however, the EMDPRS is arranged alphabetically.**

### **DESIGN AND USE OF THE EMDPRS**

This Chapter presents chief complaint information in the order described below. Chief complaints are alphabetized within each of the following groupings:

1. Traumatic Incident
2. Individual Chief Complaints
3. Time/Life-Critical Event

**NOTE:** In the different agencies each EMDPRS may be arranged differently based on the decisions made by the local medical authority. In most EMDPRSs, complaint types are arranged alphabetically.

### **INSTRUCTOR NOTES**

**Review the major elements of EMDPRS design.**

**Review the 32 chief complaints.**

**Review each of the following traumatic incident types.**

**We suggest you review each traumatic incident type by going over the:**

1. **background;**
2. **common causes;**
3. **common symptoms reported;**
4. **instructions usually given and**
5. **any special pediatric considerations the EMD should know.**

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Once you've reviewed these points (for each complaint type), review EMDPRS protocols for the members of your class.

If trainees represent many different agencies, you might consider using multiple instructors and breaking the class into groups where EMDPRS can be reviewed individually.

### **DETAILED REVIEW OF THE 32 CHIEF COMPLAINT TYPES**

#### **TRAUMATIC INCIDENT TYPES.**

Following is a detailed review of 11 traumatic incident protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS protocol for the given chief complaint.

##### **Traumatic Incident Protocol #1 - Animal Bites**

1. Background:
  - a. Except in rare instances, animal bites are non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.
  - b. Identification of high level emergencies rely on the identification of severe bleeding, the site of the bite, and the level of consciousness of the patient.
  - c. Animal control should be contacted to attempt to identify and quarantine the animal.
  - d. It is important to determine the type of animal and where the animal is at the time of the call.
2. Common Causes:
  - a. The most common animal bite is a dog bite. However, many individuals are bitten by unusual or exotic animals they may have as pets.
  - b. In some areas of the country, snake bites are fairly common.
3. Common Symptoms Described by Caller:
  - a. Solitary bites, often without serious bleeding.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patients airway, especially if patient is nauseated or vomiting.

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- b. Treat for shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS; allow patient to assume a comfortable position.
    - 3) Keep patient warm.
    - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
  - c. Control bleeding with direct pressure.
  - d. Call back if the patient's condition changes before help arrives.
  - e. For snake bites, DO NOT ELEVATE THE BITTEN AREA, DO NOT USE ICE and DO NOT ATTEMPT TO REMOVE VENOM IN ANY WAY. Reassure caller that most snake bites are not life-threatening.
  - f. Regardless of how minor the bite seems to be, patients should be advised to seek medical attention.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Children are common victims of pet bites, and their smaller size and uncontrolled reactions to animals make them more likely than adults to suffer serious facial injuries.
  - b. In situations where envenomation (venom injected into bloodstream) is possible through snake, fire ant, scorpion and spider bites, children will commonly suffer more severe reactions, including death, than will adults.

### **Traumatic Incident Protocol #2 - Assault/Sexual Assault**

- 1. Background:
  - a. These chief complaints often pose a danger to the responders and the bystanders as well.
  - b. Sexual assaults often are accompanied by traumatic injuries. The EMD should assume there are physical injuries in these cases.
  - c. The victim should be protected from further injury if possible.

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- d. Information should be relayed to responding crews regarding scene security, particularly if the assailant is nearby. In these cases, responders should be advised to stay away until the police secure the scene and the evidence.
  - e. **PRESERVATION OF EVIDENCE.** The EMD should advise callers **not** to bathe or shower, change clothes, and not to eat or drink anything until help arrives and gives them instructions.
  - f. In cases of sexual assault, crisis intervention counselors should be notified per departmental standard operating procedures (SOP).
2. Common Causes: self-explanatory
3. Common Symptoms Described by Caller:
- a. Often, the caller exhibits a high emotional content because of the frightening nature of the situation. Compassion and patience should be exercised by the EMD.
  - b. Psychological and/or physical injuries present.
  - d. Facial injuries commonly accompanied by severe bleeding.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is unconscious, nauseated or vomiting.
  - b. Treat for Shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 3) Keep patient warm.
    - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
  - c. Control bleeding with direct pressure.
  - d. Call back if the patient's condition changes before help arrives.
  - e. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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### **5. Special Pediatric Considerations:**

- a. Most pediatric cases of assault/sexual assault are reported as child abuse situations. Twenty-five percent of child abuse cases involve patients under the age of two leaving 75 percent in all other age groups up to the age of 16. Twenty percent of physically abused children are permanently injured.
- b. Intentionally inflicted injury is one of the leading causes of death in children under five, with over 2,000 deaths annually in the U.S. However, the call to EMS will rarely describe the incident as assault or abuse. EMS providers should, therefore, always be alert to the possibility that what appears to be an accidental injury in a young child may have in fact been inflicted. Pediatric cases of assault/sexual assault should be reported as child abuse. In most states, EMS providers are considered mandated reporters of suspected child abuse or neglect, and as such, in most states, are protected against charges of libel when reporting suspected child abuse.

### **Traumatic Incident Protocol #3 - Burns**

#### **1. Background:**

- a. There are various types of burns encountered in EMS including thermal burns, chemical burns and electrical burns.
- b. The size and severity of the burn usually determines the level of emergency represented by a particular incident.
- c. The size of a burn is usually based on the total body surface area that has been affected. This is done in multiples of nine commonly referred to as the "Rule of Nines." Usually, second-to-third degree burns over 20 percent of the body warrant emergency responses.
- d. Burns are classified as first, second, or third degree indicating the depth of the burn. **First** being sunburn like, **second** resulting in blistering, and **third** involving all layers of the skin and underlying tissue. This is sometimes called a full-thickness burn.
- e. The rule of nines does not accurately predict surface area of children under age eight. A useful estimate can be made by assuming that the palm of the child's hand approximates 1% of his/her body surface area; the number of "hands" needed to cover the burn can then estimate the burn size.
- f. Electrical burns should always be assumed to be worse than they appear on the surface, as internal burns may be present between the point of contact and the site where the electricity grounded out of the patient.

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- g. Patients with facial burns (particularly thermal) should be monitored closely by the EMD for possible airway complications.
  - h. It is important to determine if anything is still burning and if so, advise the caller to evacuate the dangerous area, if safe to do so.
  - i. In cases of burns that occur in enclosed areas, be aware of the possibility of carbon monoxide (CO) or other toxic poisoning or inhalation.
2. Common Causes:
- a. Thermal burns from a heat source.
  - b. Chemical burns from an acid or lye compound.
  - c. Electrical burns from an electrical source.
3. Common Symptoms Described by Caller:
- a. Burns are usually very painful as described by the caller.
  - b. The caller may describe blistering or the peeling off of skin.
  - c. Patients with electrical burns may be described as unconscious. If this is the case, assume cardiac arrest and prepare to perform CPR.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is unconscious.
  - b. Cool small burns (10% or less total body area) with clean water.
  - c. If the patient is still burning, extinguish flames with water or roll patient in a blanket or whatever is handy. **DO NOT REMOVE BURNT CLOTHING.**
  - d. Do not apply anything to the burned area. Attempt to keep it clean and the patient covered.
  - e. Continuously irrigate or flush all household chemical burns with water until help arrives.
  - f. Caution caller to be aware of electrical hazards if electrical burn is reported. Be particularly aware of electrified water. If the patient is still in contact with the electrical source do not touch them.
  - g. Treat for Shock:

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- 1) Control bleeding.
  - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
  - 3) KEEP PATIENT WARM (maintain body temperature).
- h. In cases of industrial chemical exposure, contact HAZMAT resources according to local HAZMAT procedures.
  - i. DO NOT GIVE THE PATIENT ANYTHING TO EAT OR DRINK. In cases of internal burns from a caustic ingestion from an acid or lye, advise giving the patient water to dilute the chemical if possible.
  - j. Call back if the patient's condition changes before help arrives.
  - k. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Scald burns common to the toddler-aged child frequently cause more extensive damage than a similar burn in an adult or older child because the skin is thinner. Scald burns that blister initially like a second degree burn may, in fact, be subsequently revealed as third degree or “full thickness” burns.
  - b. In addition to size and depth of the burn, other factors that contribute to the severity of burns in children include:
    - 1) Age of the child (usually a worse outcome for children under two years of age)
    - 2) Location of burn (hands, face, genitalia may require specialized care)
    - 3) Underlying medical condition (diabetes, heart conditions, immune suppression)
    - 4) Associated injuries
    - 5) Intentional burns (abuse)

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- c. If a flame or explosive burn occurred within a closed space, the possibility of thermal injury to the respiratory tract must be carefully evaluated. Signs include singed nasal hairs or soot in the sputum (“spit”). Symptoms include cough, wheezing, hoarseness, noisy or rapid breathing. Children with thermal injury to the airway may have rapid swelling resulting in partial, or even complete, airway obstruction and may need early and aggressive airway management by skilled providers.

### **Traumatic Incident Protocol #4 - Eye Problem/Injury**

#### **1. Background:**

- a. The eye is a resilient structure made of very fibrous tissues. The globe of the eye is difficult to lacerate or penetrate. If the injury is a penetrating object, consider that it may have hit the eye with sufficient force to go through the eye and into the cranium. This may result in an underlying head injury. If the level of consciousness is dropping or altered, this should be suspected.
- b. The fluids in the eye are very fragile. If the eyeball is cut open or leaking fluid, then it should not be touched or bandaged. The caller should be advised to not put direct pressure on the eye to arrest bleeding. The patient should sit up and be calmed until help arrives.
- c. Chemicals and foreign bodies are common injuries to the eye. The eye should be irrigated with room temperature water until help arrives.
- d. The caller should not attempt to remove any impaled objects in the eye. This may cause further damage to the eye.

#### **2. Common Causes:**

- a. Severe eye injuries include penetrating wounds to the eye, lacerated eyes, retinal detachments, and eye injuries associated with lowered levels of consciousness possibly indicative of an underlying head injury.
- b. Common moderate eye problems include chemicals in the eye, arc welding burns, and other thermal burns of the eye.
- c. Minor eye problems include contact lens problems, foreign bodies, corneal abrasions, and contusions from orbital fractures (fractures of the bones surrounding the eye).

#### **3. Common Symptoms Described by Caller:**

- a. Severe pain and discomfort. This is particularly true with foreign bodies in the eyes.



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- b. Bleeding is usually minimal unless surrounding facial trauma is associated with the injury.
  - c. If the eyeball itself has been lacerated or punctured, there may be a pinkish fluid leaking out of the eye. This may be the fluid within the eye and the caller should be advised to do nothing to treat this injury until help arrives. Tell the caller NOT to bandage the eye, or put any pressure on it.
  - d. Penetrating object visible. Advise the caller not to remove the penetrating object.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient has lowered level of consciousness.
  - b. Allow patient to assume a comfortable sitting position.
  - c. If the patient has a small foreign body (like dust or small dirt particles) or a chemical in the eye, it should be irrigated until help arrives. Have the caller irrigate the eye under a steady stream of room temperature water and irrigate the eye with the injured eye downhill from the nose. If the eye is being irrigated outside with the water hose, advise the caller to run the water until any hot water in the hose has been flushed out to prevent further injury to the patient.
  - e. If the eyeball is cut or leaking fluid, it should not be touched, bandaged or otherwise disturbed by bystanders. The patient should be made to sit up and be calmed until help arrives.
  - e. Treat for Shock:
    - 1) Keep patient warm (maintain body temperature).
    - 2) DO NOT GIVE PATIENT FOOD OR DRINK.
  - f. Call back if the patient's condition changes before help arrives.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. A child with an isolated eye injury is best transported with a parent or other familiar adult to help maintain the position of comfort. Attempts to restrain the child may elevate intraocular pressure.

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### **Traumatic Incident Protocol #5 - Fall Victim**

1. Background:
  - a. This protocol is useful for falls where back or other injuries have occurred.
  - b. A long fall may be considered any fall that exceeds the height of the patient. Falls of greater than six feet are often considered long falls.
  - c. With any long fall, the EMD should suspect that a spinal injury exists and use spinal precautions in providing telephone aid.
  - d. Long falls are usually third party in nature requiring the EMD to provide instructions through the third party.
  - e. Falls may have been preceded by a medical incident. This information should be relayed to the responding personnel.
  - f. The length of the fall is the easiest determinant of severity. The EMD must be mindful that external traumas, as well as internal injury may exist.
  - g. Any fall victim reported to be unconscious or with associated head or facial injuries should be assumed to have a spinal cord injury. Do not move the patient.
  - h. Falls in the elderly resulting in hip or wrist fractures are a common complaint.
  - i. Ground level falls resulting in minor injury are another common call you will receive.
2. Common Causes:
  - a. Medical causes such as epilepsy, CVA (stroke), fainting, etc.
  - b. Industrial and construction accidents.
  - c. Environmental factors like ice, snow, etc.
3. Common Symptoms Described by Caller:
  - a. Visible external trauma.
  - b. Numbness, tingling or loss of movement in cases of associated spinal cord injury.
  - c. Anxiety due to the mechanism of injury.

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4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if the patient has a decreased level of consciousness.
  - b. Do not move the patient, do not splint the injuries or otherwise disturb the patient, unless there is an airway compromise.
  - c. Treat for Shock:
    - 1) Keep patient warm (maintain body temperature).
    - 2) DO NOT GIVE PATIENT FOOD OR DRINK.
  - d. Use direct pressure to control external bleeding.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
  - a. Some special categories of falls exist for children, including walker falls, playground falls, falls from buildings, and inflicted injury attributed to an accidental fall.
  - b. Toddlers and infants can sustain skull fractures and potential brain injury in falls under four feet *if the contact surface is not shock-absorbing* (i.e., falls from shopping cart to a concrete or tile surface, from beds or changing tables to uncarpeted floors, or down uncarpeted stairs in a walker).
  - c. The severity of playground injuries relates to the height of play structures, and the shock absorbing qualities of the contact surface.
  - d. Accidental falls from windows happen commonly during the summer months and can be prevented by window guards, but children also fall from windows because they are pushed or because they are deliberately jumping to escape perceived threat or to attempt suicide.
  - e. Injuries attributed to a fall from a mechanism that is not developmentally likely or possible may be due instead to child abuse/inflicted injury. ( An example might be a one-month old said to have fallen from the changing table, at an age when most infants cannot roll from back to stomach.)

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### **Traumatic Incident Protocol #6 - Heat/Cold Exposure**

#### **1. Background:**

- a. Heat-related problems can be classified as either heat exhaustion or heat stroke, the latter representing a more serious situation.
- b. Heat exhaustion is caused by a metabolic imbalance resulting in flu-like symptoms such as pallor, nausea and vomiting. In this case, the patient should be moved to a cooler environment and be given fluids to drink (UNLESS THE PATIENT IS NAUSEOUS OR VOMITING). Heat exhaustion usually is secondary to outside exertion in hot and humid weather.
- c. In cases of heat stroke, the body loses its ability to thermoregulate itself. The body core temperature rises and the patient's level of consciousness decreases. Frequently, the patient will feel hot and dry to the touch, though they may also be profusely sweating (if they were engaged in some physical exertion). In some cases, the skin will appear reddened. The patient should be moved to a cooler environment and cooled with water. The patient should not be given fluids or anything to drink.
- d. Cold-related problems are usually frost bite or hypothermia, the latter representing the more serious situation.
- e. Frost bite represents a condition that results in the freezing of the peripheral and exposed areas, usually the fingers and toes. The tissue should not be rubbed to re-warm the tissue. The extremities should be kept warm and dry until help arrives. Prevention of further exposure and injury is the focus in these cases.
- f. Hypothermia results when the body loses its ability to thermoregulate itself and generate heat internally. The body core temperature drops and the patient's level of consciousness decreases. The patient must be removed from the cold environment and warmed. No fluids should be given to the patient in this case.
- g. Long exposure and hypothermia may cause cardiac arrest. "No patient should be assumed dead until they are warm and dead." Provision of telephone CPR, in cases of hypothermia, should be determined by local medical control.
- h. Hypothermia patients are prone to ventricular fibrillation with rough handling. Sometimes just moving the patient to the ambulance stretcher will put them into fibrillation. Caution is advised in moving these patients.

#### **2. Common Causes:**

- a. As noted previously.

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3. Common Symptoms Described by Caller:
  - a. As noted previously.
4. Instructions Commonly Provided (In Addition to Those Noted Previously):
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. Treat for Shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 3) Keep patient warm (or cool, depending on the exposure being treated).
  - c. Do not give the patient anything to eat or drink, except in cases of heat exhaustion when the patient is not vomiting or nauseous. Never give anything to drink to the patient with a decreased level of consciousness.
  - d. Gather or list the patient's medications for the doctor.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
  - a. Pediatric complaints of this type are rare and often are presented to the EMD as frostbite or chilblains (itching inflammations of the skin due to exposure to moist cold) on exposed tissues such as the fingers, feet and ears. Treatment from the EMD should be limited to getting the patient out of the cold environment and attempting to re-warm the extremity by means other than rubbing the affected tissues.
  - b. Heat-related complaints usually are presented to the EMD as a "sick child" with flu-like symptoms, dehydration from playing in the hot outdoors and slight heat exhaustion. Treatment includes removing the patient from the hot environment and providing fluids (if not nauseous or vomiting).

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- c. Children are slower to acclimate to hot or humid weather than adults and become dehydrated more rapidly. Children particularly at risk for environmental or exertion-caused heat stroke are obese, febrile, have underlying pre-existing conditions like cystic fibrosis or diabetes, or recurrent vomiting and diarrhea. Infants and toddlers are particularly vulnerable to environmental heat stroke when overdressed, left in parked cars, or confined in a hot tub, sauna or any enclosed space.
- d. Children are seldom aware of the early signs of cold such as numbness, and may not be as compliant as adults in wearing appropriate covering. Pre-pubertal children with cold injuries can be at risk for growth plate injury and subsequent poor bone growth, especially of fingers and toes. When removing the child from the cold environment, make sure to advise changing wet clothes for dry coverings.

### **Traumatic Incident Protocol #7 - Bleeding**

- 1. Background:
  - a. Bleeding can be categorized as having two sites of origin: internal or external.
  - b. Vomiting blood, bleeding from the rectum or untimely vaginal bleeding should always be considered more serious than external bleeding.
  - c. External bleeding can be categorized as either being venous (dark-red oozing blood) or arterial (bright-red spurting blood). In either case the EMD must remember that 95% of all external bleeding can be controlled with direct pressure.
  - d. The caller may be frightened by what appears to be a volume of blood. Reassure the caller and calm them.
  - e. The EMD should not advise using pressure points or tourniquets. If the bystanders have already applied a tourniquet, leave it on the patient and allow the on-scene personnel to deal with it.
  - f. Because of the vascular nature of the face and scalp, lacerations to these areas may appear to be serious bleeds. Remember to focus on controlling the bleeding, rather than estimating volume of blood loss.
  - g. Patients on blood-thinning drugs or those with hemophilia should be considered higher priority, life-threatening events and receive a higher level response.
  - h. The primary focus of the EMD should be on control of external bleeding, identifying symptoms indicating the onset of shock, and airway maintenance of the unconscious patient.

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2. Common Causes:
  - a. Self-explanatory for external bleeding.
  - b. Internal bleeding can be caused by trauma, chronic or acute gastrointestinal ulcerative disease, gynecological/ obstetric maladies, and ruptured abdominal aortic aneurysms.
3. Common Symptoms Described by Caller:
  - a. Blood squirting or pulsating out are common descriptions of external arterial bleeding.
  - b. Internal bleeding can be manifested as coffee ground-like emesis (vomit), blood in the emesis, dark tarry stools (indicating upper GI bleeds), or blood in the stools (indicating a lower GI bleed).
  - c. Anxiety, lowered levels of consciousness, agitation, chills, along with other classic symptoms of shock, are often reported in association with serious bleeds.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway if level of consciousness is decreased.
  - b. Use direct pressure for all external lacerations. If the bleeding does not stop, the caller should apply more pressure to the bleeding site.
  - c. Treat for Shock:
    - 1) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 2) Keep patient warm.
    - 3) DO NOT GIVE PATIENT FOOD OR DRINK.
  - d. For nose-bleeds, instruct the caller to pinch the nose between the thumb and finger and apply pressure in this way. Have the patient sit forward and attempt to spit the blood out (swallowing it will make the patient nauseous).
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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### **5. Special Pediatric Considerations:**

- a. Lacerations or hemorrhages in the head and facial areas in children may be serious bleeds because children have a smaller total circulating blood volume than adults, and because these areas are very well supplied with blood and make up a larger portion of the body than in adults.

### **Traumatic Incident Protocol #8 - Industrial Accidents**

#### **1. Background:**

- a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.
- b. These cases should be handled as case specific, and, if the chief complaint can be identified, the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.
- c. These calls are most often third-party calls.
- d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in or around farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained personnel.

#### **2. Common Causes:**

- a. Industrial, traumatic incidents, and entrapments in machinery.
- b. Common medical incident types such as abdominal pain, chest pain, diabetic problems, etc.
- c. Reaction or exposure to chemicals or gases in the environment.

#### **3. Common Symptoms Described by Caller:**

- a. Case specific. Often, all that is known is that an ambulance is needed at a particular location.



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### **4. Instructions Commonly Provided:**

- a. Advise callers not to go into enclosed spaces to retrieve or treat the victim because of the possible presence of noxious or dangerous fumes.
- b. The call often comes in from a security office or factory medical clinic. If the call comes from the security office of some location remote from the patient, it is very important to have them direct someone to meet the responders and guide them to the patient.
- c. Case specific pre-arrival instructions should be given if the chief complaint is identified.
- d. If the patient is trapped in machinery, the machinery should be shut off.
- e. Do not move the patient or splint the injuries.
- f. Control external bleeding with direct pressure, and treat for shock if symptoms are present.
- g. Obtain and relay pertinent information regarding previous medical history and cause of incident, if possible.
- h. Treat for Shock:
  - 1) Control bleeding.
  - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
  - 3) Keep patient warm.
  - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
- i. Lock all pets (in this case guard dogs) away because they may interfere with instructions given or attack responding personnel.

### **5. Special Pediatric Considerations: NONE**

### **Traumatic Incident Protocol #9 - Stabbing/Gunshot Victim**

#### **1. Background:**

- a. This protocol deals with penetrating trauma of any kind.

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- b. Penetrating trauma to the extremities is not as serious as penetrating trauma to the torso (or central core). Penetrating traumas below the knees and elbows are not as serious as those above these areas of the extremities.
  - c. The safety of the scene is critical to determine and relay to the responding personnel.
  - d. The EMD should attempt to determine if there is a weapon at the scene, or if the assailant is nearby.
  - e. The EMD should also determine when the incident occurred.
2. Common Causes:
- a. Self-explanatory.
3. Common Symptoms Described by Caller:
- a. Callers reporting these incidents often have an emotional response to the situation. Proper calming techniques should be used.
  - b. Visible external bleeding.
  - c. Multiple victims.
  - d. Unconscious patient.
4. Instructions Commonly Provided:
- a. Advise callers to remain safe. Do not approach scene if the assailant is presumed to be present.
  - b. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting, or if the level of consciousness is decreased.
  - c. Use direct pressure to control external bleeding.
  - d. Treat for Shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 3) Keep patient warm.
    - 4) DO NOT GIVE PATIENT FOOD OR DRINK.

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- e. Do not pull out penetrating objects.
  - f. Do not disturb the scene or remove weapons.
  - g. Gather or list the patient's medication for the doctor.
  - h. Call back if the patient's condition changes before help arrives.
  - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. A child with a penetrating injury is highly likely to require surgery. Make sure that children in your system have access to a facility with staff (emergency department, surgeon, anesthesiologist, nursing, intensive care unit, laboratory, etc.) familiar with critically ill or injured children, as well as the means to get there in a timely fashion.

### **Traumatic Incident Protocol #10 - Traumatic Injury**

- 1. Background:
  - a. This protocol is used for specific, identifiable injuries.
  - b. The focus of this protocol is to keep the patient still and to provide information so as to not cause any further injury to the patient.
- 2. Common Causes:
  - a. Fractures, dislocations, minor contusions and abrasions, etc.
  - b. Falls resulting in some specific trauma other than to the back.
- 3. Common Symptoms Described by Caller:
  - a. Fractures, pain and swelling, immobility.
  - b. Back pain, numbness, tingling, or immobility of the extremities. In this case, a spinal injury should be assumed and spinal precautions taken.
  - c. External bleeding.
- 4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting, or if the level of consciousness is decreased.

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- b. Treat for Shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 3) Keep patient warm.
    - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
  - c. Do not move the patient or splint any injuries.
  - d. Call back if the patient's condition changes before help arrives.
  - e. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. The alert, injured child should be kept with a familiar adult if possible.
  - b. Injuries that look like sprains in children may involve the non-calcified portion of the bone called the “***growth plate***.” If the growth plate of a particular bone is injured, there may be a difference in final bone length or growth compared with the other side. Children who complain of hip, groin, or knee pain after a trivial injury may have a slippage of the bone through the growth plate of the femur (thigh bone). Further weight bearing may increase the slippage. Such children should be kept off their feet until evaluated, even though they may be able to bear weight.

### **Traumatic Incident Protocol #11 - Vehicle Related Injury**

- 1. Background:
  - a. This protocol is used in cases of injury caused by vehicles like automobile collisions, auto-pedestrian incidents, and auto-motorcycle and bicycle collisions.
  - b. Because of the third party nature of these calls, information regarding how many patients, if there are any visible injuries, and the mechanisms of the accident are helpful to elicit from the caller and relay to the responding personnel.
  - c. Additional useful information includes if any one has been thrown from the vehicle or if there is a chemical spill involved. If a chemical spill has occurred, this information should be relayed, along with the type of chemical involved, to HAZMAT personnel.

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- d. Often, motor vehicle collisions resulting in serious injury or death are treated as crime scenes. Check with your local regulations about what to do about these situations.
- 2. Common Causes:
  - a. Self-explanatory.
- 3. Common Symptoms Described by Caller:
  - a. Multiple calls for the same collision. Callers may offer different accounts of the accident. Dispatch of appropriate resources should follow established in-house operating procedures.
  - b. Multiple patients, patient ejected from a vehicle, and vehicle rollovers.
  - c. Auto-pedestrian, auto-motorcycle and auto-bicycle collisions should always be considered high level emergencies.
- 4. Instructions Commonly Provided:
  - a. Treat for Shock:
    - 1) Control bleeding.
    - 2) Lay patient on left side (recovery position) EXCEPT IN SPINAL INJURY SITUATIONS.
    - 3) Keep patient warm.
    - 4) DO NOT GIVE PATIENT FOOD OR DRINK.
  - b. Do not move the patient(s) unless they are in danger.
  - c. Do not splint any injuries.
  - d. Ensure that the patient(s) has an open airway and monitor the patient's level of consciousness.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Treat collision as a potential crime scene until law enforcement arrives. Check with local regulations on how to deal with collision crime scenes.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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5. Special Pediatric Considerations: Vehicle-child injuries will tend to be worse than vehicle-adult injuries for the following reasons:
  - a. Children tend to turn and face the on-coming car (resulting in frontal injuries), while adults tend to turn away (resulting in less life-threatening back injuries).
  - b. Children's height tends to put their vital organs at about the same level as the bumper of the approaching vehicle, making the resulting injuries that much worse.
  - c. If multiple family members are involved in a vehicle crash, it is helpful to be able to transport the child with at least one familiar adult family member if possible.
  - d. Policies for extrication of children in car seats should reflect the most recent NHTSA guidelines.

### **INSTRUCTOR NOTES**

**Review each of the following Individual Chief Complaint protocols.**

**We suggest you review each individual chief complaint type by going over the:**

1. background;
2. common causes;
3. common symptoms reported;
4. instructions usually given; and
5. any special pediatric considerations the EMD should know.

**Once you've reviewed these points (for each complaint type), review EMDPRS protocols for the members of your class.**

**If trainees represent different agencies, you might consider using multiple instructors and breaking the class into groups where EDMPRS can be reviewed individually.**

**Individual Chief Complaint Protocols.** Following is a detailed review of the 14 individual chief complaint protocols. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

### **Individual Chief Complaint #1 - Abdominal Pain**

1. Background:
  - a. Most abdominal pain is non-urgent in nature. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.

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- b. Sometimes, patients experiencing cardiac events such as myocardial infarction (MI) will describe the pain as in their upper abdomen.
  - c. Women of childbearing age may be having abdominal pain due to an ectopic pregnancy. This is often accompanied by signs and symptoms of shock from internal bleeding if the fallopian tube has ruptured.
  - d. Abdominal pain can be acute or chronic. In either case the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain or fainting (in females of child bearing age).
  - e. the severity and duration of the pain often do not relate to the severity of the problem.
  - f. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems, or if they are exhibiting signs of shock, should be considered as experiencing abdominal aortic aneurysms and be dealt with as an emergency.
2. Common Causes:
- a. Most critical causes of abdominal pain include:
    - 1) Myocardial infarction (symptoms include high abdominal pain (like indigestion);
    - 2) Abdominal aortic aneurysm (symptoms include abdominal pain associated with backpain, sweating, fainting, symptoms of shock, dizziness), and
    - 3) Ectopic pregnancy (lower abdominal pain; signs of shock and may or may not have missed a period).
  - b. Moderately serious causes of abdominal pain include simple appendicitis, bowel obstruction (usually found in the elderly), perforated gastric ulcers, kidney stones and chronic illnesses involving the abdominal organs.
  - c. Least critical causes of abdominal pain include gastritis, gastroenteritis, pelvic inflammatory disease, gastric ulcers, flu-type maladies and gas.
3. Common Symptoms Described by Caller:
- a. Sharp stabbing pains, localized or covering the abdomen, generally.
  - b. Abdominal distention, or bloating.
  - c. Nausea, vomiting, or diarrhea.

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- d. Pallor, sweating, fainting, or light-headedness.
- 4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
  - b. Allow patient to assume a comfortable position.
  - c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - d. Treat for Shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume a position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - e. Gather or list the patient's medication for the doctor.
  - f. Call back if the patient's condition changes before help arrives.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 5. Special Pediatric Considerations:
  - a. Abdominal pain in the pediatric patient is rarely a symptom of a critical event. It is worth considering three special situations that require rapid response.
    - 1) Parents will sometimes attribute persistent irritability or crying in their infant to abdominal pain and may contact EMS out of alarm, or because they can no longer tolerate the crying. Irritable or colicky infants may be at increased risk of child abuse.
    - 2) Young boys with torsion (twisting) of the testicle may report only abdominal pain (either because the pain radiates to the abdomen or out of modesty). Failure to reverse the testicular torsion rapidly and restore the blood supply may result in the loss of reproductive function in that testicle.



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- 3) Because infants and children cannot always describe or communicate their symptoms, moderately serious causes of abdominal pain may not receive attention as quickly as they might in an adult, and may, therefore, be complicated by shock, peritonitis, and bowel necrosis (tissue death).
- b. Moderately serious causes of abdominal pain in children include appendicitis (often ruptured before diagnosed in young children), kidney stones, or bowel obstruction like intussusception (telescoping of the bowel on itself) or volvulus (twisting of the bowel on itself). Vomiting that is green or yellow may contain bile, and should be considered a sign of intestinal obstruction. If there has been considerable vomiting, the abdominal pain may be complicated by dehydration.
- c. Children may also complain of abdominal pain with strep throat, pneumonia, and simple gastroenteritis, constipation or gas.

### **Individual Chief Complaint #2 - Allergy/Stings**

1. Background:
  - a. An allergic reaction represents the body's adverse reaction to a foreign substance (antigen). In most cases allergic reactions are very minor.
  - b. Some individuals have severe allergies to one or more substances, and can have a very severe reaction (anaphylactic shock).
  - c. The most important symptoms to identify in all reported cases of an allergic reaction are the existence of difficulty breathing or swallowing.
  - d. Anaphylactic shock is the most critical allergic reaction.
  - e. Anaphylactic shock is of sudden onset. Hives, rashes or itching that have been present for over an hour without difficulty breathing or swallowing are unlikely to progress into anaphylaxis.
2. Common Causes:
  - a. It is important to remember that a patient could be allergic to anything, therefore, the EMD should evaluate critical symptoms and not try to determine the cause of the reaction.
  - b. Individuals are most commonly allergic to bee stings and other insect bites, seafood (particularly shellfish), nuts, berries, and medication such as injected penicillin.

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3. Common Symptoms Described by Caller:
  - a. In more severe cases the caller may report sudden collapse, difficulty breathing and/or swallowing, excessive salivation, unconsciousness, and respiratory arrest.
  - b. Anaphylactic shock may have some or all of the symptoms mentioned in 3a. These symptoms will occur within one hour of the exposure in most cases.
  - c. Minor symptoms may include a rash, swelling, hives, itching, abdominal pain, and nausea. If these symptoms have been present for over one hour, they are very unlikely to progress into anaphylaxis.
  - d. *If the caller reports that the patient has a history of allergies and has had these reactions before, **believe them!*** They may indicate that the patient has been provided a self-injectable medication, usually adrenaline or epinephrine. The EMD should tell the caller to have the patient "do what the doctor told you to do."
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is showing redness and/or swelling around the eyes, nose and mouth or having difficulty breathing or swallowing or has a decreasing level of consciousness.
  - b. If the patient's condition seems to be worsening, keep the caller on the phone and be prepared to initiate telephone CPR.
  - c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - d. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume a position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - e. Unconscious patients should be placed on their side and their airways maintained. The EMD should constantly monitor the patient's airway and breathing status if the patient becomes unconscious.
  - f. The EMD should tell the caller to have the patient "do what the doctor told you to do."

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- g. Gather or list the patient's medications for the doctor.
  - h. Call back if the patient's condition changes before help arrives.
  - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Respiratory symptoms from allergic reactions can progress very rapidly in children to partial or complete airway obstruction and respiratory arrest, because their smaller airways can become obstructed with smaller degrees of swelling. Unsuspected allergic reaction to a sting or food item can be the cause of sudden unconsciousness in the child.

### **Individual Chief Complaint #3 - Back Pain**

1. Background:
- a. The incidence of non-traumatic back pain is very common and in most cases represents minor problems. There are some critical situations that can be identified with proper questioning from the EMD using the EMDPRS.
  - b. Often a patient experiencing a cardiac event such as myocardial infarction (MI) will describe the pain as radiating through to their back.
  - c. Patients over the age of 50, complaining of lower back pain with no history of injury or chronic back problems, or if they are exhibiting signs of shock, should be considered to be experiencing abdominal aortic aneurysms and be treated as an emergency.
  - d. Back pain may be described as either acute or chronic. In either case, the key to a proper response is determining the age, history and symptoms the patient is presently exhibiting, particularly identifying the existence of chest pain (in patients over 35) or fainting (in patients over 50).
  - e. The severity of the pain and the duration of the pain often does not relate to the severity of the problem.
2. Common Causes:
- a. Most critical causes of back pain include falls, abdominal aortic aneurysms, thoracic dissections, neurologic problems, and MI
  - b. Moderately serious causes of backpain include kidney stones, rib and spinal fractures (if traumatically induced).

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- c. Least critical causes of back pain include chronic lower back pain, vertebral disc disease, kidney infections, and sprained backs.
- 3. Common Symptoms Described by Caller:
  - a. Sharp stabbing pains, localized or covering the abdomen, generally.
  - b. Abdominal distention or bloating.
  - c. Nausea, vomiting, or diarrhea.
  - d. Pallor, sweating, fainting, or light-headedness.
  - e. Numbness or tingling in the extremities.
- 4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
  - b. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - c. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort. (IN CASES OF TRAUMATIC BACK PAIN, THE PATIENT SHOULD NOT BE MOVED).
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - d. Gather or list the patient's medications for the doctor.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
- 6. Special Pediatric Considerations: NONE

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### **Individual Chief Complaint # 4 - Breathing Problem**

#### **1. Background:**

- a. Breathing problems are usually more severe in the very young and the very old.
- b. Often a patient experiencing a cardiac event such as myocardial infarction (MI) will complain of difficulty breathing.
- c. Breathing problems should always be considered a high-level medical emergency.
- d. The previous medical history should be relayed to the responding units.

**NOTE:** People who call you reporting breathing problems represent one of the most difficult calls you will have to deal with. What may be one person's distress, could be another's chronic breathing problem (that they have to deal with daily).

Of most importance is that you try to determine what has changed about the person's breathing that prompted the caller to call for help.

#### **2. Common Causes:**

- a. Primary breathing problems having to do with the lungs (lower respiratory system) include asthma, pneumonia, drug overdose, emphysema, pulmonary embolus, congestive heart failure, and acute pulmonary edema.
- b. Secondary breathing problems having to do with the upper airway include croup, choking, epiglottitis, and partial airway obstruction.
- c. Tertiary breathing problems caused by an unrelated illness or incident include hyperventilation syndrome, stroke (CVA), diabetic ketoacidosis, seizure, cardiac arrest, and in some cases severe facial trauma.

#### **3. Common Symptoms Described by Caller:**

- a. Difficulty breathing, wheezing, shortness of breath, noisy breathing, "fighting for air," "gasping for air", etc.
- b. Anxiety, change in skin color, feeling of "impending doom."
- c. Excessive coughing.

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### **4. Instructions Commonly Provided:**

- a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
- b. Calm and reassure the patient. Tell the patient to relax and slow their breathing, blow the air out, and encourage the patient to breath with you.
- c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
- d. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort (usually sitting-up).
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
- e. Gather or list the patient's medication for the doctor.
- f. Call back if the patient's condition changes before help arrives.
- g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

### **5. Special Pediatric Considerations:**

- a. *Breathing problems are the most common pediatric medical problem encountered by the EMD and can be critical. Air passages are smaller in children than in the adult and therefore, problems will be more acute.*

Airway obstruction happens more commonly in infants and children than in adults. Infants may not learn to breath through their mouths until as late as nine months of age, therefore, simple nasal congestion of a cold is capable of causing significant respiratory distress in the infant.

In addition to the signs and symptoms listed above, consider the presence of head bobbing, grunting (a sound made in expiration with each breath) flaring of the nostrils and retracting of the skin with each breath at the clavicles, ribs and diaphragm as signs of advancing respiratory distress.

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- b. Although the incidence of epiglottitis has markedly declined since the use of a vaccine to prevent the usual bacteria responsible, it remains a true respiratory emergency. The hallmark presenting sign is usually marked throat pain to the point of being unable to swallow (drooling), fever and rapidly progressing respiratory distress in a febrile child who assumes a “tripod” sitting position with his/her neck flexed and head extended (the "sniffing" position).

The child with suspected epiglottitis, and all children with suspected upper airway obstruction, should be allowed to assume the position of comfort, kept calm, not separated from his or her parent and brought to medical attention as soon as possible.

### **Individual Chief Complaint # 5 - Chest Pain**

- 1. Background:
  - a. Chest pain often is caused by a blockage of one or more of the coronary arteries. This blocks the oxygen delivery to a portion of the heart muscle and causes chest pain.
  - b. Often a patient experiencing a cardiac event such as myocardial infarction (MI) will describe the pain as in their upper abdomen.
  - c. The average age of the onset of symptomatic cardiac disease is 35 for males and 40 females. Any male patient 35, or older or female 40, or older complaining of abdominal pain should be considered a possible cardiac event.
  - d. Any patient over the age of 35 complaining of chest pain should be considered a cardiac event.
  - e. Patients with prior histories of cardiac problems may represent a higher critical problem.
- 2. Common Causes:
  - a. Most critical causes of chest pain include heart attack (myocardial infarction or MI) and a dissecting thoracic-aortic dissection (aneurism in the chest).
  - b. Potentially critical problems causing chest pain include pulmonary embolisms (blood clot in the lungs) and pericarditis (infection of the tissues surrounding the heart).
  - c. Least critical causes of chest pain include pleurisy, pneumonia, esophagitis, hiatal hernias, viral illnesses, rib injuries, muscle strains and "shingles."
- 3. Common Symptoms Described by Caller:

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- a. Chest pain that is related to a problem with the respiratory system or lungs is usually described as a sharp stabbing pain that increases or decreases with respirations.
- b. Chest pain associated with a heart attack or MI is often described as a dull crushing pain or a pressure sensation that may radiate to the neck, jaw and/or left arm (similar to angina).



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The patient often experiences a change in skin color (ashen gray or pale), and they often experience severe sweating (diaphoresis). The patient may be nauseous, vomiting and have difficulty breathing. They often are very anxious and have a "feeling of impending doom."

### **4. Instructions Commonly Provided:**

- a. Monitor and maintain patient's airway, especially if patient is nauseous or vomiting.
- b. Allow patient to assume a comfortable position, usually sitting up to aid in respiration.
- c. The patient may report that they have been given medication to take when they experience chest pain. If they ask the EMD what they should do, the EMD should advise the caller to have the patient do what their doctor told them to do. If the patient has taken any medication, this information should be relayed to the responding units.
- d. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
- e. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
- f. Have first-party caller stay on the phone, or if the patient has an altered level of consciousness, or if caller states that they feel as if they "are going to die."
- g. Gather or list the patient's medications for the doctor.
- h. Call back if the patient's condition changes before help arrives.
- i. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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### **5. Special Pediatric Considerations:**

- a. Chest pain is a common symptom in young adolescents, BUT is unlikely to be due to myocardial infarction. Spontaneous pneumothorax, air leaking from an acute asthmatic attack, and/or pulmonary embolus can occur in the pediatric population.
- b. Because it is not commonly recognized, pulmonary embolus has a much higher fatality rate in children than in adults. The child with chest pain, fast heart and breathing rate, and any of the following, can be considered at risk for pulmonary embolus:
  - 1) obesity;
  - 2) birth control pills;
  - 3) dehydration;
  - 4) nephrotic syndrome;
  - 5) family history of clotting problems;
  - 6) recent long bone fracture; and
  - 7) prolonged bedrest or inactivity.

### **Individual Chief Complaint # 6 - Convulsion/Seizure**

#### **1. Background:**

- a. A convulsion or seizure is believed to be caused by a misfiring of nerve cells in the brain either as a result of injury, lack of oxygen or disease.
- b. Patients going into cardiac arrest occasionally will have a brief, anoxic seizure due to the brain being robbed of oxygen. It is often an initial sign of cardiac arrest. Seizure patients over 35 whose breathing cannot be verified should be considered cardiac arrests until breathing can be confirmed.
- c. There are many types of seizures including grand mal, petit mal, psychomotor, focal motor, and jacksonian. All present themselves in a different fashion. The most common by far is the grand mal.
- f. Ninety-five percent of all seizure patients with an unknown history have been diagnosed with epilepsy.

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- e. Seizures associated with fever (febrile seizures) in children under age 6 are common. They are usually short in duration (less than 15 minutes), self-limited, and rarely cause respiratory or cardiac compromise. It is unusual for febrile seizures to require medication in the field, and they do not indicate that the child has epilepsy.
  - f. CPR should not be performed on a seizure patient unless the pulse is not present.
  - g. Once the seizure has stopped, maintaining an open and clear airway is the most important thing the EMD can do for the seizure patient.
  - h. Most seizures last approximately 45-60 seconds. Anoxic seizures resulting from cardiac arrest are usually much shorter. After the seizure stops, the patient is normally unconscious and in what is referred to as a "post-ictal" state. This condition usually lasts less than 15 minutes and may be longer for some patients. Once the seizure has ended, the patient experiences excessive salivation and may have a great deal of oral secretions. This is the time when airway maintenance is crucial.
  - i. Patients reported to be having continuous or multiple seizures represent a much higher medical emergency.
  - j. Some epileptic patients can tell when they are going to have a seizure and may have someone call for help before the seizure starts. This is called an "aura."
2. Common Causes:
- a. Epilepsy, trauma to the head, brain or intra-cranial tumors, meningitis, cardiac arrest, anoxia (lack of oxygen), fever, and many other causes. Anything that disrupts the normal functioning of the brain has the potential to cause a seizure.
3. Common Symptoms Described by Caller:
- a. Sudden stiffening and jerking movements over the entire body. The caller may describe the patient as arching their back and perhaps crying out just before the seizure.
  - b. Bluish or discoloration of the skin during the seizure.
  - c. Snoring or gurgling after the seizure is over. This indicates a possible compromise in the airway.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway after the seizure. Gently roll the patient on their side and clear out the mouth to clear the airway.

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- b. Do not attempt to hold the patient down during the seizure.
  - c. Do not perform CPR while the patient is jerking.
  - d. Do not attempt to place anything in the mouth while patient is seizing to prevent them from biting or "swallowing" the tongue.
  - e. Do not let the patient get up or wander around after the seizure, as they may not be fully conscious.
  - f. Move dangerous objects away from the patient during the seizure to prevent injury.
  - g. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - h. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - i. Gather or list the patient's medications for the doctor.
  - j. Call back if the patient's condition changes before help arrives.
  - k. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Seizures in children are a common reason for calling EMS. Although many childhood seizures will be found to be simple febrile seizures, epilepsy is common in childhood.
  - b. Status epilepticus is a series of consecutive seizures or continuous seizure activity in which the child does not regain consciousness between seizures.
  - c. Prolonged seizures can cause brain damage, especially if associated with either low blood and brain levels of glucose and oxygen.

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- d. Seizure activity may be subtle, and can look like limpness, eye rolling or blinking, chewing or mouthing motions, cycling movements of the legs, as well as the more easily identified tonic-clonic shaking of extremities. It is helpful for the bystander and the EMS providers to note any asymmetry of movement, including eye deviation.

### **Individual Chief Complaint # 7 - Diabetic Problems**

#### **1. Background:**

- a. Diabetes is a condition that prevents the body from correctly metabolizing sugar into energy. The body lacks the ability to produce correct amounts of insulin, the hormone that aids in sugar metabolism. This requires the diabetic patient, in many cases, to have to take insulin.
- b. When a diabetic fails to take their insulin, they will have a gradual rise in their blood sugar levels. This is a slow onset and results in diabetic ketoacidosis. Ketoacids are a toxic byproduct of this. The body tries to eliminate these toxins through the respiratory system, and the patient may be described as breathing very deeply. The ketoacids can be detected on the patient's breath as a fruity or sweet smell. The patient may become very ill with flu-like symptoms. If this goes unchecked the patient may progress into diabetic coma, a state of unconsciousness caused by extremely high blood sugar levels. Patients often seek medical attention prior to this occurring.
- c. When an insulin dependent diabetic takes too much insulin or takes their regular dose and engages in higher levels of activity or fails to eat, the insulin depletes the body's available blood sugar, and the patient experiences a rapid decrease in consciousness. This condition is known as insulin shock. It has a rapid onset with the level of consciousness decreasing until the patient is unconscious. This is the most serious diabetic emergency faced by EMS.
- d. Due to the high reliability of the family's reporting of an insulin reaction or diabetic problem, this protocol should be accessed if the caller indicates that it is a diabetic emergency.
- e. The main thing for the EMD to be concerned with is maintaining the patient's airway if their level of consciousness is decreased.
- f. The EMD should attempt to obtain and relay information regarding the history of the patient.

#### **2. Common Causes:**

- a. As noted previously.

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3. Common Symptoms Described by Caller:
  - a. As noted previously.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient's level of consciousness is decreased or if they are unconscious.
  - b. Allow patient to assume a comfortable position.
  - c. Administration of sugar or soda-pop to a diabetic patient is left up to local medical control. This is because doing so alters the assessment of the patient by responding personnel, and may not have any noticeable effect on the patient's level of consciousness. ***You need to check your local regulations on the administration of sugar to diabetics.***
  - d. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - e. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - f. Gather or list the patient's medications for the doctor.
  - g. Call back if the patient's condition changes before help arrives.
  - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
  - a. Some children with diabetes have been provided with glucagon, a medication that can be given as a shot to raise blood sugar if the child becomes unconscious or begins seizing with insulin shock. If the caller is able to administer glucagon during such episodes, the EMD should advise that it be given "as your doctor has directed you."

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### **Individual Chief Complaint # 8 - Headache**

1. Background:
  - a. Since the brain is the organ of concern in patients reporting headache, the primary focus of the EMD should be changes in the patient's alertness (level of consciousness), speech and motor problems. Both indicate more serious causes.
  - b. Sudden severe onset of pain may suggest a more serious underlying cause as well (subarachnoid and subdural hemorrhage).
  - c. Most other headaches such as migraine, tension, and sinus are less serious in nature. EMS is not commonly called for these complaints.
2. Common Causes:
  - a. Most serious causes of headaches include: meningitis; subdura hematomas and subarachnoid hemorrhage. These are usually reported as having started as a sudden severe onset of pain and are often associated with speech and/or motor problems.
  - b. Moderately serious causes include migraines, cluster and other vascular headaches.
  - c. Minor causes of headaches include tension, sinus headaches (the common headache) and intracerebral bleeding due to hypertension.
3. Common Symptoms Described by Caller:
  - a. Sudden severe onset of pain associated with speech or motor problems should be considered more serious than a simple complaint of headache without any other symptoms.
  - b. History of migraines. The patient may be nauseated and vomiting and be incapacitated with pain.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
  - b. Allow patient to assume a comfortable position.
  - c. Do not give the patient anything to eat or drink.
  - d. Gather or list the patient's medications for the doctor.

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- e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Meningitis is more common in children than adults and is potentially contagious. If the symptoms described include fever, respiratory precautions should be advised for the EMS team dispatched.

### **Individual Chief Complaint # 9 - Heart Problems**

1. Background:
- a. This complaint represents a diagnosis rather than a chief complaint. The EMD must concentrate on looking for symptoms from the caller, rather than a presumed diagnosis.
  - b. The EMD should attempt to determine if chest pain is present and then proceed to the appropriate protocol for that specific chief complaint.
  - c. The EMD should attempt to gain information regarding previous medical or cardiac history. The patient may have an implanted defibrillator or pacemaker that has malfunctioned. These complaints may not always be associated with classic cardiac symptoms.
  - d. If, after all questioning, the patient is without symptoms, the EMD may attempt to have the caller get a pulse rate on the patient. Many heart problems are manifested by a rapid heart rate. An adult with a resting heart rate of over 140 may be having a heart problem. Slow heart rates can cause decreased consciousness. Any heart rate less than 40 is also cause for concern.
  - e. Congestive heart failure may present itself as breathing difficulty, weakness, sweating and the caller may report to you that the patient has been on typical heart medications (like diuretics).
2. Common Causes:
- a. Electrical malfunctions of the heart resulting in irregular or rapid heart rates.
  - b. Acute myocardial infarction.
  - c. Malfunctioning internal defibrillators



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3. Common Symptoms Described by Caller (presentation)
  - a. Firing internal defibrillator.
  - b. Chest pain, difficulty breathing and other cardiac- related symptoms.
  - c. Irregular or rapid heart rate. Often described as "palpitations".
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
  - b. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - c. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - d. Gather or list the patient's medications for the doctor.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
  - a. Common causes of pediatric heart problems include congenital abnormalities of the heart that can cause congestive heart failure or cyanosis and rhythm disturbances, particularly very fast heart rates above 200. Symptoms in the infant and child include those mentioned, as well as poor feeding and change in color or activity level.

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### **Individual Chief Complaint # 10 - Ingestion/Poison/Overdose**

1. Background:
  - a. An overdose, as defined for dispatch, is a purposeful and intentional ingestion involving any patient over the age of 12. The patient also has a motive for their actions.
  - b. An accidental ingestion is defined as an accidental, or unintentional, intake by a child under the age of 12.
  - c. A poisoning is defined as an accidental intake of a toxic substance, usually by a child under the age of 12.
  - d. All overdose patients should be considered a possible danger to themselves and others. The safety of the scene must be addressed during questioning.
  - e. Access to the local poison control intervention line should be established and accessed, when appropriate, according to local policies and procedures.
2. Common Causes:
  - a. Accidental ingestions at home are common in children and the elderly (confusion with medication).
  - b. Overdoses are related to depression, either as a gesture for help or as a serious suicide attempt.
  - c. Poisonings occurring in the home usually involve a small child who has ingested a family member's medications, some toxic or caustic substance.
3. Common Symptoms Described by Caller:
  - a. Normally described as noted previously.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - c. Treat for shock:
    - 1) Keep airway clear.
    - 2) Let patient assume position of comfort.

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- 3) Calm and reassure patient.
  - 4) Keep the patient warm (maintain body temperature).
  - d. In cases of poisoning, do not induce vomiting. If caustic ingestion, have patient drink water or milk until help arrives. (CHECK WITH POISON CONTROL CONSULTANTS FIRST, UNLESS OTHERWISE INDICATED IN YOUR EMDPRS).
  - e. Do not give the patient anything to eat or drink except in cases of a caustic ingestion of an acid or lye.
  - f. Protect the patient from further injury to them self if safe to do so.
  - g. Contact poison control if ingestion is accidental and the patient is free of symptoms.
  - h. Call back if the patient's condition changes before help arrives or if the patient leaves the scene.
  - i. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Poisoning is the most common cause of non-fatal injury in the home. The most common serious poisonings in children involve caustics, hydrocarbon or petroleum products, iron (medicinal), antidepressants, and cardiac medications.

### **Individual Chief Complaint # 11 - Psychiatric/Behavioral Problem**

1. Background:
  - a. Psychiatric or behavioral problems can relate to a diagnosed problem such as schizophrenia, mania, depression, etc.
  - b. Underlying medical problems often are mistaken for behavioral problems. In diabetics or epileptics, their lowered level of consciousness during or after manifestation may be mistaken for a psychiatric or behavioral problem. Attempt to determine medical history.
  - c. All patients exhibiting psychiatric or behavioral problems should be considered a potential danger to themselves and others.
  - d. It should be determined if the patient has a weapon.

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- e. If the patient has attempted suicide, the specific EMDPRS chief complaint protocol should be accessed in the EMDPRS and followed to treat the reported situation.
  - f. The EMD may want to check if resources exist for crisis intervention.
2. Common Causes:
- a. As described previously.
3. Common Symptoms Described by Caller:
- a. Patient exhibiting abnormal or unusual behavior.
  - b. Patient threatening violence.
  - c. Patient threatening suicide.
  - d. Depression.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. Attempt to protect the patient from them self.
  - c. Attempt to lay the patient down and calm him/her.
  - d. Do not give the patient anything to eat or drink.
  - e. Gather or list the patient's medication for the doctor.
  - f. Call back if the patient's condition changes or if the patient leaves the scene before help arrives.
  - g. If available, Crisis Intervention should be contacted. Check with your agency about local regulations on using Crisis Intervention.
  - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. In children under 8, many episodes of altered behavior of possible psychiatric origin will in fact be related to underlying toxic exposure, neurologic event or infection, or child abuse.

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### **Individual Chief Complaint # 12 - Sick Person**

1. Background:
  - a. A sick person is a patient who has an indefinable chief complaint, non-categorical symptoms, or when the caller provides specific information on a previous diagnosis.
  - b. This card is accessed when a second party caller reports a diagnosis or some other term to describe what they believe may be the problem.
  - c. The function of this protocol is to assist the EMD in identifying the chief complaint or some other significant symptom or medical history, rather than rely on the caller's presumed diagnosis.
2. Common Causes:
  - a. Any illness or malady could potentially be handled on this protocol.
3. Common Symptoms Described by Caller:
  - a. Callers often will relate a previous diagnosis.
  - b. Nausea, vomiting, weakness, or dehydration.
  - c. These patients have the potential to be very ill, as in the case of a terminally ill patient. Calm and reassure the caller who may have had an emotional response to the situation.
  - d. If a specific chief complaint is identified, the EMD should use the EMDPRS protocol that suits the patient's chief complaint.
4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - c. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.

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- 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
  - d. Gather or list the patient's medications for the doctor.
  - e. Call back if the patient's condition changes before help arrives.
  - f. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Children with a pre-existing diagnosis are much more likely than healthy children to have a medical event requiring EMS. Some agencies maintain a roster of children in the community with special or pre-existing health care needs whose safety network relies upon a knowledgeable EMS system familiar with the child's condition, usual complications, emergency treatment, and usual site of emergency and chronic care. Parents and caregivers of such children have frequently been equipped with such information and can assist EMS in such situations.
  - b. It can be difficult to tell whether a child is having an emergency or not. The younger the child, the more vague or nonspecific may be the signs of illness; irritability, crying, vomiting, fever, and lethargy are symptoms that may accompany a wide range of pediatric conditions, many trivial, some life-threatening. Behind the complaint "something is wrong with my child" ("sick, hurt, crying") may be an unsuspected foreign body in the esophagus, intussusception, meningitis, child abuse, or a simple ear infection.
- Behind the complaint, "my baby had a spell where she was blue, pale, not breathing, unresponsive..." may be something as simple as regurgitation or as complex as seizure, heart rhythm disturbance, apnea or sepsis. Because the symptoms are nonspecific, even the experienced pediatric provider will sometimes have difficulty discriminating between these conditions in person, let alone over the phone. Over-triage is an acceptable response to this ambiguity.

### **Individual Chief Complaint # 13 - Stroke/CVA**

1. Background:
  - a. A stroke, or cerebral vascular accident (CVA) denotes a situation where the blood flow has been interrupted to a portion of the brain due to a blood clot, hypertension-induced intracerebral hemorrhage or a ruptured aneurysm.

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- b. The CVA patient usually should be considered a high level medical emergency. There are drugs used in the hospital environment that can reverse the effects of CVA if administered within an hour of the event. Rapid transport can salvage these patients.
- 2. Common Causes:
  - a. Blockage of a cerebral artery.
  - b. Ruptured aneurysm.
  - c. Dissecting aneurysm.
  - d. Intracerebral hemorrhage.
- 3. Common Symptoms Described by Caller:
  - a. Speech and motor problems. Motor functions diminish on one side of the body.
  - b. Numbness and tingling may be present.
  - c. History of stroke.
  - d. Altered level of consciousness (lower levels of consciousness indicate the event is more severe).
- 4. Instructions Commonly Provided:
  - a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. Allow patient to assume a comfortable position.
  - c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - d. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).

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- e. Gather or list the patient's medications for the doctor.
  - f. Call back if the patient's condition changes before help arrives.
  - g. The patient may have difficulty walking, do not let them wander around (they could injure themselves further).
  - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Symptoms suggestive of a stroke are not common in healthy children but can rarely occur for all the same reasons as in an adult, or because of a complicated migraine. Children with underlying medical conditions like leukemia, renal failure, hemophilia, or metabolic disease are at risk for CVAs. Whoever is attending the child must pay particular attention to the airway in the child.

### **Individual Chief Complaint # 14 - Unknown/Man Down**

- 1. Background:
  - a. These calls are usually third-party calls reporting an unknown situation or a man down and appearing to need assistance.
  - b. The third-party nature of these cases makes it difficult to get valid, comprehensive information from the caller about the patient's condition.
  - c. The questions should help to determine if the patient is alive or not. The third party caller can report if the patient was sitting, standing or lying down and if the patient was seen talking or moving at all to help clarify this question.
- 2. Common Causes:
  - a. Intoxication, trauma, underlying medical complaints.
  - b. Virtually anything causing the patient to fall and not get up would be handled with this protocol if the caller was a third-party (away from the scene and patient).
- 3. Common Symptoms Described by Caller:
  - a. Man down in the park, etc. Caller not near the patient and little information available.
  - b. Medical assist alarms.



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4. Instructions Commonly Provided:
  - a. Return to the patient and establish consciousness, airway and breathing. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting or if the level of consciousness is decreased.
  - b. Ask the caller if there is a phone or person closer to the patient that could be used so you can get better information.
  - c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - d. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - e. Watch for and guide the ambulance to the patient.
  - f. Call back if the patient's condition changes before help arrives.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
  - a. Unsuspected allergic reaction should be considered.

### **INSTRUCTOR NOTES**

**Review each of the following Time/Life-Critical Events.**

**We suggest you review each event by going over the:**

1. **background;**
2. **common causes;**
3. **common symptoms reported;**
4. **instructions usually given;**
5. **any special pediatric considerations the EMD should know.**

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Once you've reviewed these points (for each time/life-critical event), review EMDPRS protocols for the members of your class.

If trainees represent many different agencies, you might consider using multiple instructors and breaking the class into groups where EMDPRS can be reviewed individually.

**Time/Life-Critical Events.** Following is a detailed review of the 7 Time/Life Critical Events. Your instructor will provide additional information about these, and then you will be given the opportunity to practice using your local EMDPRS for the protocol that corresponds to the chief complaint.

### **Time/Life-Critical Event # 1 - CO/Inhalation/HAZMAT**

1. Background:
  - a. The purpose of this protocol is to identify what the situation is, where the patient is, if the patient is trapped in machinery and direct the caller to have someone meet and guide the responding personnel to the patient.
  - b. These cases should be handled as case specific, and if the chief complaint can be identified, the EMD may go to a more appropriate protocol for the provision of pre-arrival instructions.
  - c. These calls are most often third-party calls.
  - d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
  - e. CO is a colorless odorless gas that is the result of incomplete combustion.
  - f. Carbon monoxide (CO) poisoning is the most common hazardous material/inhalation complaint encountered in EMS.
  - g. CO binds with the hemoglobin molecule in the blood stream and displaces oxygen and carbon dioxide. This makes this complaint very urgent in that the patient is possibly suffocating at the cellular level. More severe cases of CO poisoning may require hyperbaric treatment in a decompression chamber in order to provide sufficient energy to break these chemical bonds.
  - h. Patients can be found in any stage of intoxication. One of the most telling symptoms is the level of consciousness. If the patient is unconscious or has a decreased level of consciousness, they should be assumed to have a severe exposure and immediate transport should be advised.

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- i. Other inhalation and HAZMAT situations present should also be assumed to be high level emergencies. The EMD should determine the source and type of exposure, and advise the caller to remain safe and away from the hazardous environment. If information regarding the type and source of the exposure is obtained, it must be relayed to the responding crews.
2. Common Causes:
  - a. CO poisoning resulting from smoke inhalation, poorly ventilated heating systems, industrial accidents, and automobile exhaust systems.
  - b. Most other HAZMAT incidents occur in industrial settings or on the highway, secondary to motor vehicle accidents involving chemical spills. The EMD should be aware of local HAZMAT policies in these cases.
3. Common Symptoms Described by Caller:
  - a. Headache, nausea and altered level of consciousness are common CO poisoning complaints.
  - b. In cases of other inhalations and HAZMAT situations, callers may report respiratory difficulty, burning of the eyes, superficial chemical burns, nausea, vomiting, and decreased levels of consciousness.
  - c. Multiple victims are commonly present if in an industrial or public location.
4. Instructions Commonly Provided:
  - a. Remove patient from hazardous environment **if safe to do so.**
  - b. Monitor and maintain patient's airway, especially if patient is described with a decreased level of consciousness or is unconscious.
  - c. Irrigate chemical exposures to the skin with water if burns are present.
  - d. Enclosed spaces present grave danger where chemicals or gases may be present. These are most common in industrial or farm settings. The offending agent may not be obvious. Rescue should only be attempted by trained rescue personnel.
  - e. Be aware that the patient may have difficulty walking. Discourage ambulation. (Do not let them walk around)
  - f. **DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.**

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- g. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - h. Have someone guide the responding personnel to the patient(s) if in an industrial setting.
  - i. Call back if the patient's condition changes before help arrives.
  - j. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. CO inhalation events occur in pediatric-aged patients usually in a situation with poorly ventilated home heating, prolonged car travel, or house fires. CO poisoning has been implicated in crib death or Sudden Infant Death Syndrome (SIDS). If the exposure involves multiple victims, there may be variable levels of exposure and symptoms. It is helpful to have specific plans or protocols for the transfer of children to hyperbaric treatment facilities.
  - b. HAZMAT situations involving children are uncommon, but may involve multiple children if located at a school or day care facility. Any HAZMAT disaster planning should have provisions specific to the management of single or multiple affected children.

### **Time/Life-Critical Event # 2 - Cardiac Arrest**

- 1. Background:
  - a. Cardiac arrest occurs when the heart ceases to produce a productive rhythm, hence no blood is circulated. Respiratory arrest (stopped breathing) usually accompanies cardiac arrests. In this state, patients are defined as "clinically dead."
  - b. Patients in cardiac arrest who have CPR initiated early, and continued throughout the response, have a better chance for survival.

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- c. All patients who are reported to be unconscious and not breathing or whose breathing cannot be verified by a second-party caller, should be assumed to be in cardiac arrest.
  - d. A system of consistent and uniform questioning should be used on all calls to determine if the patient is conscious and breathing, and to determine cardiac arrest as soon as possible.
  - e. Be certain to determine pulselessness during CPR instruction sequence to avoid chest compressions on patients who are in respiratory arrest only.
  - f. Always determine if the patient has choked on something prior to doing CPR. They may need choking instructions to clear the upper airway obstruction.
2. Common Causes:
- a. Ventricular fibrillation, acute myocardial infarction, trauma, chronic illness, electrocution, suffocation, drowning, or choking.
3. Common Symptoms Described by Caller:
- a. Patient unconscious and not breathing, unresponsive.
  - b. Patient's color has changed.
  - c. Patient described as "making funny or strange noises" (a term used by callers to describe agonal or dying respirations). Agonal respirations are breaths that occur after cardiac arrest and are ineffective in gathering oxygen for the body. They are frequently described as "weak," "heavy," "gasping," "snoring," "gurgling" or "moaning." The rate at which these respirations occur are usually referred to as "weak or heavy," or "every once in a while."
4. Instructions Commonly Provided:
- a. Follow CPR or Choking instructions found in EMDPRS to provide telephone instructions to the caller.
  - b. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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### **5. Special Pediatric Considerations:**

- a. Unlike adults, children develop cardiac arrest from a multitude of different causes, 10% or less having to do with primary heart problems. You will not commonly deal with pediatric cardiac arrest. When you are called upon to do so, it is helpful to realize that some children presumed to be in full cardiac arrest have respiratory arrest only, and that recovery from respiratory arrest can be excellent if effective airway support and rescue breathing are begun as soon as possible. It can be very difficult to feel a pulse in infants or small children, and there should be as little delay as possible in providing airway support and rescue breathing.
- b. The child in full cardiac arrest has most commonly been suffering some period of oxygen deprivation and/or circulatory failure, and the outcome of resuscitative efforts is usually very poor. Unlike in adults, timely defibrillation will not often change the outcome of pediatric cardiac arrest. Moreover, basic life-support units equipped with semiautomatic defibrillators will usually have weight or age limitations on the use of the equipment. Critical interventions in a pediatric cardiac arrest are airway and breathing management and circulatory support. Units responding to a pediatric cardiac arrest ideally should be skilled in advanced airway management and vascular or intraosseous access. Recommendations for instructions for bystander CPR for children are different than for adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

### **Time/Life-Critical Event # 3 - Choking**

#### **1. Background:**

- a. Upper airway obstruction constitutes a life-critical emergency requiring immediate intervention by the EMD.
- b. Often the only chance for survival of the patient is for the EMD to assist via telephone choking instructions.
- c. Patients with a total upper airway obstruction are not able to breathe, speak or cough.
- d. Unless the airway is cleared of the blockage, the patient will become unconscious within 1-2 minutes and irreversible brain damage and death will occur in 4-6 minutes.
- e. Choking instructions given over the telephone by trained EMDs are one of the most common life-saving interventions undertaken by the EMD.

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- f. A patient who has gagged, or has a partial airway obstruction should not have choking instructions provided. If the patient is able to make any sounds through the airway, the patient should not be agitated. If the patient has a cough that seems to be addressing the problem, don't intervene. If the patient appears to be deteriorating, then something should be done. Signs of a partial obstruction are high-pitched wheezing or whistling sounds.
- 2. Common Causes:
    - a. Choking on food and small toys (in children) are the most common causes of upper airway obstructions
    - b. Some situations such as asthma, epiglottitis and severe allergic reactions may appear to be choking episodes.
- 3. Common Symptoms Described by Caller:
    - a. The patient may have grabbed his/her throat to signal a choking episode.
    - b. The patient's color is blue or has changed from its normal color.
    - c. The patient may be unconscious.
    - d. The patient may be reported to have been eating.
- 4. Instructions Commonly Provided:
    - a. Follow Choking instruction sequence found in EMDPRS to provide telephone instructions to the caller.
    - b. Be sure to avoid performing chest compressions by ascertaining status of pulse during the choking treatment instructions.
    - c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
    - d. Treat for shock:
      - 1) Keep airway clear.
      - 2) DO NOT GIVE FOOD OR DRINK.
      - 3) Let patient assume position of comfort.
      - 4) Calm and reassure patient.
      - 5) Keep the patient warm (maintain body temperature).

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- e. Do not attempt choking interventions on patients who do not have a complete airway obstruction (cannot talk, breathe or speak).
  - f. Gather or list the patient's medications for the doctor.
  - g. Keep caller on the phone until help arrives and takes over from the bystanders.
  - h. Repeat choking sequence until help arrives or until the airway is cleared.
  - i. Call back if the patient's condition changes before help arrives.
  - j. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Choking on foreign bodies is a common pediatric problem, and one for which pediatricians frequently give safety advice to parents. Small toy parts, latex balloons, mercury batteries, and solid food pieces are common causes.
  - b. The child who has recovered from a significant choking episode should be evaluated for the possibility of a foreign body that has been aspirated into the lower airway (gone into the body of the lung).
  - c. Foreign bodies in the esophagus of young children can sometimes cause choking and respiratory compromise.
  - d. Recommendations for instructions for management of choking are different in infants, children and adults. These differences should be conveyed in specific neonatal, infant and child CPR protocols.

### **Time/Life-Critical Event # 4 - Drowning**

1. Background:
- a. This protocol is intended to be used in those cases of near-drowning incidents ("Drowning" is death due to immersion, whereas "near-drowning" is survival from such an event.)
  - b. If the patient is in cardiac arrest, the EMD should identify the unconsciousness and not breathing status and proceed directly to instructions for CPR.
  - c. In cases of shallow water diving incidents, the presence of a cervical spinal injury must always be assumed as a possibility. Care should be taken to not move the patient unless absolutely necessary.



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- d. In cases of near drowning, the patient is often found in respiratory arrest only and not in cardiac arrest. This means that frequently, if the patient is discovered quickly, the patient needs only ventilatory support. The EMD must carefully check for pulselessness prior to initiating CPR.
  - e. Resuscitation efforts should be undertaken with all victims of near drowning. No one knows how long a patient can be under water and be successfully resuscitated. There have been documented saves of victims that have been underwater for over an hour.
  - f. A theory explains that this phenomenon is related to the mammalian diving reflex. Most aquatic mammals are able to exist for long periods of time underwater on lowered levels of oxygen. It is believed that the younger the patient, the longer they can be submerged due to the holdover vestige of the patient's pre-birth disposition where they lived in an aquatic environment on lowered levels of oxygen. Combined with the cold temperature of the water in many cases, the salvagability of the patient is enhanced.
2. Common Causes:
- a. Bathtub drowning, pools, ponds, and canals (particularly with children).
  - b. Shallow water diving incidents resulting in spinal cord injury.
3. Common Symptoms Described by Caller:
- a. Coughing, difficulty breathing, lowered levels of consciousness, vomiting, and change in skin color.
  - b. With possible spinal cord injury, the patient may also be experiencing numbness, tingling and immobility in the extremities.
4. Instructions Commonly Provided:
- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting.
  - b. Allow patient to assume a comfortable position. Do not move the patient if a spinal cord injury is suspected due to the mechanism of injury and in cases of shallow water diving incidents.
  - c. If the patient is in the water and breathing, support the patient there until help arrives to remove the patient from the water.

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- d. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - e. Call back if the patient's condition changes before help arrives.
  - f. If patient is found to be unconscious and not breathing, proceed immediately to CPR treatment sequence and initiate CPR.
  - g. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations:
- a. Drowning is a major cause of unintentional death in young children. Near-drowning, or submersion injury are examples of critical pediatric emergencies for which you may receive calls for help. For these calls, field management is vital. The real window of opportunity for medical intervention is in the hands of the bystander, EMD, and EMS responders in the field.
  - b. The injury in near drowning is global oxygen deficit. The goal of treatment is to reverse that deficit with rapid, effective airway support, rescue breathing and other advanced airway management techniques.
  - c. Although children are given rescue breathing at lower volumes and pressure than adults, wet lungs are stiffer and harder to move. In giving bystanders pre-arrival instructions, make sure that the chest is moving.
  - d. Vomiting is common in submersion victims and can complicate the airway support, particularly if it is not anticipated.
  - e. Children are more likely than adults to continue to lose body heat when wet, even in warm weather. Replacing wet clothes, if possible, will minimize heat loss.
  - f. Near-drowning, like most other critical pediatric injuries, is best managed with prevention. Restricting unsupervised access to known water hazards, promoting swimming lessons, and teaching bystander CPR are some primary and secondary prevention strategies that EMS systems can advocate.

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### **Time/Life-Critical Event # 5 - Electrocution**

1. Background:
  - a. All electrocutions should be considered cardiac arrests until proven otherwise.
  - b. Often, falls are associated with electrocutions. Always consider the possibility of a long fall.
  - c. The primary concern should be gathering information regarding the safety of the scene and protecting the bystanders by advising them to beware of electrical risks and protecting the rescuers by relaying information about scene safety.
  - d. Electrocutions are often associated with internal burns.
  - e. All electrocutions should be considered high-level emergencies.
2. Common Causes:
  - a. Industrial accidents and electrical and utility workers electrocuted by coming in contact with high voltage wires. These are often associated with long falls. Always consider the possibility of other associated trauma as a result of the fall, and take spinal precautions.
  - b. Construction accidents.
  - c. Household accidents associated with electrified water.
  - d. Lightning strikes.
3. Common Symptoms Described by Caller:
  - a. Cardiac arrest.
  - b. Burning sensation or surface burns at contact point. Also there may be burns at the point of grounding.
  - c. Cardiac-related problems.
4. Instructions Commonly Provided:
  - a. Advise the caller to not come in contact with the electrical source and to beware of electrified water. The caller may attempt to disconnect the electrical source if safe to do so.
  - b. Monitor and maintain patient's airway, especially if patient has a lowered level of consciousness.

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- c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
  - d. Treat for shock:
    - 1) Keep airway clear.
    - 2) DO NOT GIVE FOOD OR DRINK.
    - 3) Let patient assume position of comfort.
    - 4) Calm and reassure patient.
    - 5) Keep the patient warm (maintain body temperature).
  - e. Do not move the patient if a fall is involved.
  - f. Call back if the patient's condition changes before help arrives.
  - g. Contact with appropriate utility to secure the scene should be made as soon as possible in the case of downed wires. This includes police and fire department for traffic and scene control in the case of traffic accidents.
  - h. Lock all pets away because they may interfere with instructions given or attack responding personnel.
5. Special Pediatric Considerations: - NONE

### **Time/Life-Critical Event Type # 6 - Pregnancy/Childbirth**

- 1. Background:
  - a. Gestation encompasses three trimesters or time periods. The *first* trimester includes months 1, 2 and 3. The *second* trimester includes months 4, 5, and 6. The *third* trimester includes months 7, 8, and 9.
  - b. As the pregnancy progresses, the severity of complications increases for both the mother and the child.
  - c. Bleeding and other complications that occur during the first 7 months of the pregnancy usually represent a miscarriage situation.
  - d. Often, the chief complaint will not be related to the pregnancy. If there seems to be no relationship with the pregnancy, the appropriate chief complaint protocol should be accessed, even if the caller informs you of the pregnancy.
  - e. Pregnancy is a condition, not an illness.

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- f. Pregnancy complications in the first and second trimesters, along with vaginal bleeding situations related to gynecological problems, should be handled symptomatically. Usually this requires treatment for shock.
  - g. An imminent birth is defined as any prima gravida (first pregnancy) woman in her third trimester with labor pains less than two minutes apart. Any multigravida woman (second or third pregnancy) having labor pains less than five minutes apart should be considered an imminent birth as well.
  - h. An imminent birth situation also exists if any part of the baby is showing, or the mother complains that the pains are constant and/or she has the urge to push.
2. Common Causes:
- a. Gynecological complaints most often reported include unusually heavy menstrual bleeding or untimely vaginal bleeding.
  - b. Pregnancy-related problems included in the first or second trimester usually relate to vaginal bleeding or abdominal pain.
  - c. Imminent births include complaints of labor pains as described above, constant labor pains and/or baby parts showing.
3. Common Symptoms Described by Caller:
- a. Untimely vaginal bleeding with associated shock symptoms.
  - b. Onset of labor, water breaking, etc.
  - c. Imminent birth as defined above.
4. Instructions Commonly Provided:

### **FOR CHILDBIRTH:**

- a. Do not try to prevent the birth by holding the legs together or crossing the legs.
- b. Have mother remove all clothing below the waist.
- c. Get mother on the bed or floor, and prop her back up with pillows.
- d. Have mother take deep breaths during the pains and try not to push.
- e. Follow specific childbirth pre-arrival instruction scripts as written in the approved EMDPRS.

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### **FOR PREGNANCY PROBLEMS:**

- a. The most common complaint related to pregnancy problems is untimely vaginal bleeding and associated abdominal pain. Symptoms of shock may be described by the caller as pallor, dizziness or lowered level of consciousness, chills, or diaphoresis (sweating).
- b. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).

### **APPLICABLE TO BOTH:**

- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting, or if the level of consciousness is decreased.
- b. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
- c. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
- d. Gather or list the patient's medications for the doctor.
- e. Call back if the patient's condition changes before help arrives.
- f. Lock all pets away because they may interfere with instructions given or attack responding personnel.

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### **5. Special Pediatric Considerations:**

- a. The pregnant child (under age 16) is more likely than an older woman to have become pregnant under circumstances of coercion, rape, incest, or under the influence of drugs or alcohol. She may have sought unusual means to terminate the pregnancy. Some states allow for protection of confidentiality to pregnant minors; consult your local regulations in this regard.

### **Time/Life-Critical Event # 7 - Unconscious/Fainting**

#### **1. Background:**

- a. Unconsciousness denotes a state of consciousness from which an individual cannot be aroused, even with painful stimulation.
- b. A fainting episode denotes a situation from which an individual has previously fainted and has now awakened.
- c. Single fainting episodes (such as a syncopal episode where the patient faints and then returns to a normal consciousness level) are not considered generally to be high-level emergencies, though you should treat all faintings with respect until you are certain there is no immediate danger.
- d. Multiple fainting episodes are considered to be more serious.
- e. The primary function of this protocol is to ensure that the patient has an open airway and that it is maintained until help arrives (airway control).
- f. This protocol should be used when there has been a faint, or if the patient is unconscious and the caller does not know why. If the patient is an unconscious diabetic, or seizure patient, the EMD should utilize those protocols specifically.

#### **2. Common Causes:**

- a. Stroke, diabetes, cardiac arrest, overdoses, poisonings, intoxication, head injuries, hypoxia, seizures, simple fainting episodes, shock and heart rhythm problems (too slow or fast).
- b. Conceivably anything that effect the brain in a negative way can render the patient unconscious.

#### **3. Common Symptoms Described by Caller:**

- a. Fainting episode or episodes of unconsciousness for unknown reasons.

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### **4. Instructions Commonly Provided:**

- a. Monitor and maintain patient's airway, especially if patient is nauseated or vomiting, or if the level of consciousness is decreased.
- b. Lay patient on his back and monitor respirations. Turn patient on their side if vomiting occurs.
- c. DO NOT PLACE A PILLOW UNDER PATIENT'S HEAD.
- d. Treat for shock:
  - 1) Keep airway clear.
  - 2) DO NOT GIVE FOOD OR DRINK.
  - 3) Let patient assume position of comfort.
  - 4) Calm and reassure patient.
  - 5) Keep the patient warm (maintain body temperature).
- e. Gather or list the patient's medications for the doctor.
- f. Call back if the patient's condition changes before help arrives.
- g. Lock all pets away because they may interfere with instructions given or attack responding personnel.

### **5. Special Pediatric Considerations:**

- a. Fainting or unconsciousness in the pediatric patient can be similar to the adult patient in underlying cause and degree of severity. However, there are several special circumstances to consider.

In the infant, ***Apparent Life Threatening Events (ALTE)*** may occur from all the same causes mentioned in the general discussion, as well as from washing of stomach contents up the esophagus (reflux), unsuspected or unreported child abuse, serious bacterial infection and primary apnea (stopping breathing) related to immature respiratory reflexes. Usual reported symptoms will include limpness or stiffening, unresponsiveness, pallor or blue spell, which resolve either spontaneously or with attempts at resuscitation or stimulation. All such infants should be evaluated promptly, regardless of how stable they may appear after the event.



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- b. Infants and toddlers are subject to a particular kind of breath-holding spell that is very alarming to witness, but usually self-limited. Typically, the toddler will become angry or distressed about something and, while crying, suddenly hold his or her breath, sometimes to the point of unconsciousness, turning blue and possibly resulting in seizures. The hallmark of these episodes is that they occur while the child is crying and resolve on their own after a matter of seconds.

A second variety of breath holding in toddlers and young children is related to the fainting adults have when witnessing a distressing event. This spell usually occurs when the child turns pale and becomes unresponsive after a sudden, but trivial, injury. Both varieties may be difficult to distinguish from more concerning problems, unless the child has done this in the past.

### **SUMMARY**

This Chapter has trained you on the medical content and design of the 32 chief complaint types. You have learned about the three types of complaints, and have been trained on the use of your local EMDPRS protocol.

Next, you will complete the course by taking a final examination. The exam is comprehensive. It covers all material taught in this course. There will be role-play scenarios where you will be evaluated on your ability to use the knowledge you have gained.

## ***Chapter Nine: CHIEF COMPLAINT TYPES***

### **INSTRUCTOR NOTES**

#### **Presenting the 32 Chief Complaint Types**

##### **Helpful Hints:**

The protocols should be separated into three groups and taught in the order of traumatic incident types first, medical complaints second, and then the time/life-critical events. This approach is helpful because each grouping of incident types has a different focus during caller interrogation.

Approximately 15-20 minutes can be spent on each protocol as a rule, longer for some, less for others. There are many videos available that demonstrate dispatcher interventions in cardiac arrest, choking, and childbirth situations that are very useful in lecture. You might want to check with the guidance committee (or medical director) to see if any of these are available, or if they could be purchased.

After discussing each section of chief complaint types, trainees should have about one hour of practical scenario role playing in which each student has the opportunity to be the caller and the dispatcher. This should be a supervised role play session with no more than 5-6 students in a group. Additional instructors are useful during this time if there are more than 3 or 4 groups.

#### **Present the Chief Complaints in the Following Order:**

##### **Traumatic Incident Types**

- 1. Animal Bites**
- 2. Assault**
- 3. Burns**
- 4. Eye Problems**
- 5. Fall Victim**
- 6. Heat/Cold Exposure**
- 7. Hemorrhage/Laceration**
- 8. Industrial Accidents**
- 9. Stab/Gunshot Wound**
- 10. Traffic Accident**
- 11. Traumatic Injury**

##### **Medical Chief Complaint Types**

- 1. Abdominal Pain**
- 2. Allergies**
- 3. Back Pain**
- 4. Chest Pain**
- 5. Breathing Problems**
- 6. Convulsions/Seizures**
- 7. Diabetic Problems**
- 8. Headache**
- 9. Heart Problems**

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- 10. Ingestion/Poisonings**
- 11. Psychiatric Problems**
- 12. Sick Person**
- 13. Stroke/CVA**
- 14. Unknown Problem/Man Down**

### **Time/Life-Critical Events**

- 1. CO Poisoning/HAZMAT**
- 2. Cardiac Arrest**
- 3. Choking**
- 4. Drowning**
- 5. Electrocution**
- 6. Pregnancy/Children**
- 7. Unconscious/Fainting**

### **For Each Chief Complaint Discuss:**

**For every chief complaint, consider discussing the protocols in this order:**

**Background;**  
**Common causes;**  
**Symptoms frequently reported by callers;**  
**Instructions commonly given to callers;**

**Common pediatric considerations (if any) and then review the local EMDPRS protocol regarding the complaint. You must successfully understand and deal with the medical issues that you will face on a daily basis. This information is basic. All descriptions and/or definitions are generic. They are not strict medical definitions.**

# **CHAPTER TEN: PRACTICAL EXAMINATION**

## **OVERVIEW**

This unit is the final practical exam for the EMD training curriculum. You will demonstrate the proper and effective use of the knowledge that you have gained throughout this course.

The practical exam will assist the instructor(s) in determining your readiness for the job of emergency medical dispatcher. As a result, you will likely be asked to demonstrate proficiency in all areas of EMD in a comprehensive format.

You should be prepared to deal with all 32 chief complaint types. You will be tested, however, on only 16 "real-life" simulations. These scenarios are conducted between the instructor and you, or you may be asked to participate in acting out a scenario with another trainee as the instructor(s) observe you. The instructor will decide on which types of complaints you will be tested.

## **OBJECTIVES**

1. Demonstrate effective and proper EMD behaviors.
2. Complete review examination.

## **EXAM OVERVIEW**

The course practical examination will consist of simulated or scripted calls for emergency medical assistance. You will be assessed on 16 of the 32 chief complaint types.

You will be assessed on your knowledge and demonstration of the skills required for effective dispatch including:

1. Proper telephone techniques;
2. Proper handling of difficult callers;
3. Proper use of EMDPRS to elicit dispatch information;
4. Proper use of the EMDPRS to allocate resources based on use of information gathered;
5. Proper identification of medical emergencies; and
6. Proper delivery of medical instructions from the EMDPRS.

## ***Chapter Ten:* PRACTICAL EXAMINATION**

Simulations and scripted role-plays will be based on actual 9-1-1 calls. Transcriptions might be used when available and cost effective. In either case, caller identification information contained in the calls will be removed and replaced with false data to protect the identity of the callers.

# REVIEW EXAM

1. Name three misconceptions about EMDs.
2. The EMD must determine the nature and severity of the medical incident type.
  - a. True
  - b. False
3. It is not the EMD's job to help ensure the safety of bystanders, callers, patients, and responding personnel.
  - a. True
  - b. False
4. The EMD uses the \_\_\_\_\_ to provide pre-arrival instructions to callers that prepare them for the responder's arrival.
5. Name five characteristics of a successful EMD.
6. What are the three phases of the dispatch function?
7. Describe what happens during the call-receiving phase.
8. List in order the five questions the EMD is trying to answer by using the interrogation procedures.
9. Name three resources commonly found in most EMS systems.
10. What is a tiered system? What are four of the more common tiers?
11. Name the two most common response modes.
12. Describe what is meant by a "cold" response.
13. Describe what is meant by a "hot" response.
14. \_\_\_\_\_ means that you are ultimately responsible for your actions.
15. Who can be held liable?
16. Why are EMDs rarely found to be negligent?
17. Who generally is the primary defendant in court cases involving negligence?
18. When does the "duty to act" relationship begin?
19. Describe what is meant by the term "proximate cause."

20. Define “simple negligence.”
21. Name two of the four methods used to establish a “standard of care.”
22. Describe the “emergency rule.”
23. What is the “principle of reasonableness?”
24. List and describe the two types of damages that can be awarded.
25. When can immunity be granted under the “Good Samaritan” laws?
26. List or identify three things an EMD cannot reveal.
27. What is meant by “governmental immunity?”
28. List or describe five attributes or behaviors that EMDs should be concerned about.
29. List, identify, or describe four strategies used by individuals to avoid litigation
30. Name the situations where “Good Samaritan” laws protect you from liability.
31. \_\_\_\_\_ is defined as the “failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with similar experience/training) would in similar situations.
32. Money awarded in a lawsuit is known as \_\_\_\_\_.
33. Name three of the four criteria that courts use in establishing negligence.
34. What is meant by “breach of duty”?
35. What are the two types of negligence?
36. What is meant by “gross negligence?”
37. What is “abandonment?”
38. Describe what is meant by “foresee ability.”
39. Define “detrimental reliance.”
40. Name the two types of consent.
41. Define “Actual Consent.”
42. Define “Implied Consent.”

43. Name three inappropriate concerns that EMDs tend to have.
44. On what two levels can you employ strategies for avoiding liability?
45. List and describe five strategies an agency can use to avoid liability.
46. Name four of the six systems of the body.
47. Name the three subsystems of the nervous system.
48. Name the two parts of the central nervous system.
49. Name the two types of nerves found in the peripheral nervous system.
50. Name the parts of the autonomic nervous system.
51. What does the autonomic nervous system control? (Name 3)
52. Name three of the five major parts of the circulatory system.
53. There are ten parts to the respiratory system, name five.
54. The digestive system has thirteen major parts, name seven.
55. What is the purpose of the musculoskeletal system?
56. What are the three components of the musculoskeletal system?
57. There are six parts to the musculoskeletal system, name four.
58. Name three of the four parts of the upper extremity.
59. Name two of the three parts of the lower extremity.
60. Name the parts of the hand.
61. How many bones are there in the spinal column?
62. Name the three types of bones in the foot.
63. Name the three types of muscles.
64. What do tendons do?
65. What do ligaments do?
66. What are two of the four parts of the genito-urinary system that are common to both men and women?



67. Name three of the four parts of the female reproductive system.
68. Name two of the three parts of the male reproductive system.
69. Name three time-sensitive criteria used to determine dispatch criteria (what does the medical director use to establish dispatch types?)
70. Name the four levels of consciousness (descriptions are acceptable at the instructor's discretion).
71. What are three questions you can use to determine the level of a patient's consciousness?
72. What is shock?
73. Name five of the seven symptoms of shock.
74. Name five of the seven signs of shock.
75. Name five types of shock.
76. List, describe, or identify six things you can tell callers to do for persons going into shock.
77. List, describe, or identify five of the six symptoms of respiratory distress.
78. Describe the role of platelets in clotting.
79. What is the most effective way to stop bleeding?
80. What should callers do when bandages become soaked with blood?
81. What do you do about tourniquets?
82. Describe the difference between a bleeding artery and a bleeding vein.
83. What is the purpose of arteries?
84. What do veins do?
85. What is the difference between a (cardiac arrest) heart attack and a myocardial infarction?
86. What is the difference between a sign and a symptom?

## REVIEW EXAM ANSWERS

1. Name three misconceptions about EMDs.
  - a. Callers are too upset to give useful responses.
  - b. Callers are unable to give useful information to EMD.
  - c. Medical knowledge unimportant, therefore use other public-safety dispatchers.
  - d. Dangerous NOT to “go lights and sirens.”
  - e. EMD too busy dispatching to give medical instructions.
  - f. Medical advice over phone can’t help patients (may actually be dangerous).
2. The EMD must determine the nature and severity of the medical incident type.
  - a. True
3. It is not the EMDs job to help ensure the safety of bystanders, callers, patients, and responding personnel.
  - b. False
4. The EMD uses the Emergency Medical Dispatch Protocol Reference System (EMDPRS) to provide pre-arrival instructions to callers that prepare them for the responder’s arrival.
5. Name five characteristics of a successful EMD.
  - a. Helpful/compassionate
  - b. Handles stress
  - c. Masters skills, philosophy of EMD
  - d. Gathers and prioritized information
  - e. Assists responder in locating patients.
  - f. Determines nature of medical emergency without diagnosing
  - g. Helps responders on-scene by doing as they request
  - h. React passively to hostile callers
  - i. Maintains confidentiality
6. What are the three phases of the dispatch function?
  - a. Call receiving
  - b. Dispatch
  - c. Post-Dispatch
7. Describe what happens during the call-receiving phase.

EMD takes call, interrogates caller to determine chief complaint and goes to EMDPRS for additional interrogation and information.

8. List in order the five questions the EMD is trying to answer by using the interrogation procedures.
- a. Where?
  - b. What?
  - c. How?
  - d. Who?
  - e. When?
9. Name three resources commonly found in most EMS systems.
- a. BLS/ALS
  - b. Fire personnel
  - c. Police personnel
  - d. Hospitals/Emergency Care Facilities
  - e. Instructor: At your discretion you can accept the following as well:
  - f. HAZMAT
  - g. Rape Crisis
  - h. Burn Centers
  - i. Language Banks
  - j. National Guard Units
10. What is a tiered system? What are four of the more common tiers?
- An EMS system with more than one level of response. Four common tiers include First responders, BLS, ALS, and Air Ambulance/Aeromedical.
11. Name the two most common response modes.
- a. Cold response
  - b. Hot response
12. Describe what is meant by a “cold” response.
- The ambulance responds without using lights or sirens as part of the normal traffic flow.
13. Describe what is meant by a “hot” response.
- The ambulance responds using lights and sirens and is allowed special traffic privileges.
14. Liability means that you are ultimately responsible for your actions.
15. Who can be held liable?
- The EMD and/or the Agency with which s/he works.

16. Why are EMDs rarely found to be negligent?

Because they are trained according to the standards of care established for that community, which are set up to protect others against unreasonable risk or harm.

17. Who generally is the primary defendant in court cases involving negligence?

The agency an EMD works for.

18. When does the “duty to act” relationship begin?

As soon as the caller requests EMS assistance.

19. Describe what is meant by the term “proximate cause.

That some action taken by the defendant (EMD or Agency) caused an injury to the patient.

20. Define “simple negligence.”

Negligent conduct not purposeful or due to “malicious intent.”

21. Name two of the four methods used to establish a “standard of care.”

- a. Judge behavior in comparison to others with similar training and experience.
- b. Judge behavior in comparison to local customs (protocols and guidelines)
- c. Judge behavior in comparison to local or state statutes, laws, ordinances, or administrative orders.
- d. Judge behavior in comparison to professional standards published by organizations involved in emergency work.

22. Describe the “emergency rule.”

It means that someone who is acting in an emergency situation cannot be held to the same standard of conduct as someone not in that situation.

23. What is the “principle of reasonableness?”

What a “reasonable person” would do in the same situation.

24. List and describe the two types of damages that can be awarded.

- a. Compensatory = repaying plaintiffs for money lost or “pain and suffering”
- b. Punitive = payments used to punish defendants

25. When can immunity be granted under the “Good Samaritan” laws?
- Person acting in good faith.
  - Person acting in emergency
26. List or identify three things an EMD cannot reveal.
- Patient names
  - What was said in conversation with the caller
  - Unusual behaviors not directly attributable to the medical condition (unless there is danger to the responders)
  - patient lifestyle
  - Knowledge of patient HIV (+) status
27. What is meant by “governmental immunity?”
- Immunity stemming from laws or statutes established locally or at the state level. Does not apply to EMDs in private agencies or to cases of “gross negligence.”
28. List or describe five attributes or behaviors that EMDs should be concerned about.
- Failure to send EMS resources when requested
  - Subjective judgment of caller credibility
  - Subjective judgment of caller chief complaint
  - An argumentative or combative attitude (on behalf of EMD)
  - Allowing prejudices to affect objective decision making (through prior dealing with the caller)
  - Giving medical instruction without using locally approved EMDPRS.
  - Failure to train (or be certified) as an EMD
  - Not giving instructions when needed or when a protocol exists for it.
29. List, identify, or describe four strategies used by individuals to avoid litigation.
- Avoid inappropriate EMD behaviors
  - Active participation in QA/QI and continuing education programs.
  - Seek/obtain certification as an EMD
  - Follow policies/procedures/practices used by your agency and community.
  - Report problems or problematic situations as soon as possible and in writing.
30. Name the situations where “Good Samaritan” laws protect you from liability.
- Person acting in emergency
  - Person acting in “good faith”
  - Persons not guilty of gross negligence or malicious misconduct toward a patient.

31. Negligence is defined as the “failure to act or perform in a particular situation as any other reasonable, prudent dispatcher (with similar experience/training) would in similar situations.
32. Money awarded in a lawsuit is known as damages.
33. Name three of the four criteria that courts use in establishing negligence.
- a. Duty
  - b. Breach of Duty
  - c. Injury/Damage
  - d. Proximate Cause/Causation
34. What is meant by “breach of duty”?
- That you did not perform your duty as established by acting according to the local “standard of care”
35. What are the two types of negligence?
- a. Simple
  - b. Gross
36. What is meant by “gross negligence?”
- Negligent actions undertaken with the intent to cause harm (“malicious intent”) and with disregard for the safety of persons and or property.
37. What is “abandonment?”
- Leaving a patient known to be in a life-threatening condition, including starting medical treatment and then turning over treatment to someone with less medical training than yourself (with the end result being worsening of the patient’s condition)
38. Describe what is meant by “foreseeability.”
- You can’t see what is happening at the scene, so you must rely on the information given to you by the caller. If a situation exists where the on-scene findings are different than those reported by callers then you are not liable.
39. Define “detrimental reliance.”
- When an action or service does not happen that a person claims was reasonable to rely on the agency to perform or provide, resulting in injury or worsening of the patient’s condition.

40. Name the two types of consent.
- a. Actual
  - b. Implied
41. Define “Actual Consent.”
- Direct verbal or non-verbal communication to someone who is giving aid.
42. Define “Implied Consent.”
- In situations where someone is unconscious or unable to respond, it is safe for us to assume that the person would want to be helped.
43. Name three inappropriate concerns that EMDs tend to have.
- a. EMDs should be certified as EMD instructors.
  - b. EMDs should have advanced medical knowledge
  - c. EMDs should relay confidential information to responding personnel.
  - d. EMDs should fear being sued for giving medical instructions.
  - e. EMDs should fear telling callers that an ambulance is “on the way”
44. On what two levels can you employ strategies for avoiding liability?
- a. Individual
  - b. Agency
45. List and describe five strategies an agency can use to avoid liability.
- a. Well-defined screening and hiring practices.
  - b. Use of a well-organized, well-written orientation and training program.
  - c. Regular/objective progress reports for probationary personnel
  - d. Clearly defined job expectations and work descriptions
  - e. Regular review and update of policies and procedures
  - f. Provision of proper EMD training and certification
  - g. Appropriate implementation of an EMD program
  - h. Adequate EMD program management
  - i. Use of a physician to provide medical direction for the program
  - j. Establishing and use of a QA/QI program for dispatch
  - k. Implement ongoing continuing education program
  - l. Budgeting for QA/QI improvements.

46. Name four of the six systems of the body.
- Nervous system
  - Circulatory system
  - Respiratory
  - Digestive system
  - Musculoskeletal system
  - Genito-Urinary system
47. Name the three subsystems of the nervous system.
- Central nervous system
  - Peripheral nervous system
  - Autonomic nervous system
48. Name the two parts of the central nervous system.
- Brain
  - Spinal cord
49. Name the two types of nerves found in the peripheral nervous system.
- Motor nerves
  - Sensory nerves
50. Name the parts of the autonomic nervous system.
- Uses motor nerves like peripheral nervous system
51. What does the autonomic nervous system control? (Name 3)
- Heartbeat
  - Force of the heart's contractions
  - Blood vessel diameter
  - Bronchial diameter
  - Pupillary action (pupils)
52. Name three of the five major parts of the circulatory system.
- Heart
  - Arteries
  - Veins
  - Capillaries
  - Blood



53. There are ten parts to the respiratory system, name five.

- a. Pharynx
- b. Epiglottis
- c. Larynx
- d. Trachea
- e. Bronchi
- f. Lungs
- g. Bronchioles
- h. Alveoli
- i. Diaphragm/rib muscles
- j. Pleura

54. The digestive system has thirteen major parts, name seven.

- a. Mouth
- b. Throat
- c. Esophagus
- d. Stomach
- e. Small intestine
- f. Large intestine
- g. Liver
- h. Gall bladder
- i. Pancreas
- j. Appendix
- k. Spleen
- l. Rectum
- m. Anus

55. What is the purpose of the musculoskeletal system?

- a. Supports body
- b. Provides movement
- c. Protects vital organs
- d. Bones make and destroy blood cells

56. What are the three components of the musculoskeletal system?

- a. Muscles
- b. Bones
- c. Connective tissues (ligaments and tendons)

57. There are six parts to the musculoskeletal system, name four.
- a. Head
  - b. Vertebral column
  - c. Chest
  - d. Upper extremities
  - e. Pelvis
  - f. Lower extremities
58. Name three of the four parts of the upper extremity.
- a. Shoulder girdle
  - b. Arm
  - c. Forearm
  - d. Hand
59. Name two of the three parts of the lower extremity.
- a. Upper leg
  - b. Lower leg
  - c. Foot
60. Name the parts of the hand.
- a. Carpal
  - b. Metacarpals
  - c. Phalanges
61. How many bones are there in the spinal column?
- Thirty-three
62. Name the three types of bones in the foot.
- a. Tarsals
  - b. Metatarsals
  - c. Phalanges
63. Name the three types of muscles.
- a. Voluntary
  - b. Involuntary
  - c. Cardiac
64. What do tendons do?
- Connect muscles to bones
65. What do ligaments do?

Connect bones to other bones

66. What are two of the four parts of the genito-urinary system that are common to both men and women?
- Kidneys
  - Ureters
  - Urinary bladder (bladder)
  - Urethra
67. Name three of the four parts of the female reproductive system.
- Fallopian tubes
  - Ovaries
  - Uterus
  - Vagina
68. Name two of the three parts of the male reproductive system.
- Testes
  - Scrotum
  - Penis
69. Name three time-sensitive criteria used to determine dispatch criteria (what does the medical director use to establish dispatch types?)
- Consciousness
  - Shock
  - Respiratory distress
70. Name the four levels of consciousness (descriptions are acceptable at the instructor's discretion).
- Alert
  - Verbal
  - Pain
  - Unresponsive
71. What are three questions you can use to determine the level of a patient's consciousness?
- Is the patient awake?
  - Have you tried to wake them up?
  - Can they talk to you?

72. What is shock?

It is defined as the “lack of tissue perfusion.” It simply means that there is a lack of circulation throughout the body, particularly to the heart, lungs, kidneys, and brain.

73. Name five of the seven symptoms of shock.

- a. Feeling of “impending doom”
- b. Weakness
- c. Nausea
- d. Thirst
- e. Dizziness
- f. Coolness
- g. Restlessness/anxiety

74. Name five of the seven signs of shock.

- a. Pale/cool/moist skin
- b. Shallow/rapid breathing
- c. Dull/lackluster eyes or dilated pupils
- d. Decreasing levels of consciousness
- e. Fluid loss from bleeding, vomiting, or diarrhea
- f. Weak/“thready” pulse
- g. Steady drop in blood pressure

75. Name five types of shock.

- a. Anaphylactic
- b. Cardiogenic
- c. Hemorrhagic
- d. Hypovolemic
- e. Neurogenic
- f. Psychogenic
- g. Septic

76. List, describe, or identify six things you can tell callers to do for persons going into shock.

- a. **DO NOT GIVE THEM ANYTHING TO EAT OR DRINK!**
- b. Make sure the patient’s airway is clear so they can breathe.
- c. Control bleeding (if external) by the use of direct pressure.
- d. Calm and reassure the patient.
- e. Lay patient on side (preferably left-side) or allow them to remain in a position that is most comfortable, unless they are trauma patients.
- f. **DO NOT MOVE TRAUMA PATIENTS!!!!**
- g. Keep the patient warm and prevent the loss of body heat by covering the patient with something.

77. List, describe, or identify five of the six symptoms of respiratory distress.

- a. Anxiety/restlessness
  - b. Cyanosis (turning blue)
  - c. Rapid breathing (tachypnea)
  - d. Noisy respiration
  - e. Labored appearance (looks like they are working hard)
  - f. Sweaty (diaphoretic)
78. Describe the role of platelets in clotting.
- Blood platelets go to the wound and break down to block the hole
79. What is the most effective way to stop bleeding?
- Direct pressure
80. What should callers do when bandages become soaked with blood?
- Apply more clean bandages and do not remove the old ones.
81. What do you do about tourniquets?
- Tell caller not to apply them. However, if the caller says one has already been applied then tell them to leave it on.
82. Describe the difference between a bleeding artery and a bleeding vein.
- a. Artery bleeds with spurts of bright red blood
  - b. Vein bleeds in an oozing/pulsing fashion with dark red blood.
83. What is the purpose of arteries?
- To carry blood from the heart to the rest of the body.
84. What do veins do?
- Carry blood back to the heart after it has dropped its oxygen payload and picked up waste products from cells.
85. What is the difference between a (cardiac arrest) heart attack and a myocardial infarction?
- Heart attack is the cessation of heart functions, while a myocardial infarction is the actual death of a part of the heart muscle due to a lack of oxygen. A heart attack is the end result of a MI.

86. What is the difference between a sign and a symptom?
- a. A sign is something a rescuer can see, hear feel, touch, smell, or taste.
  - b. A symptom is something that patients express about themselves (like “I’m hot/cold,” “My chest hurts,” etc.)